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HIGHWAY
COMMISSION

STATE DOCUMENTS
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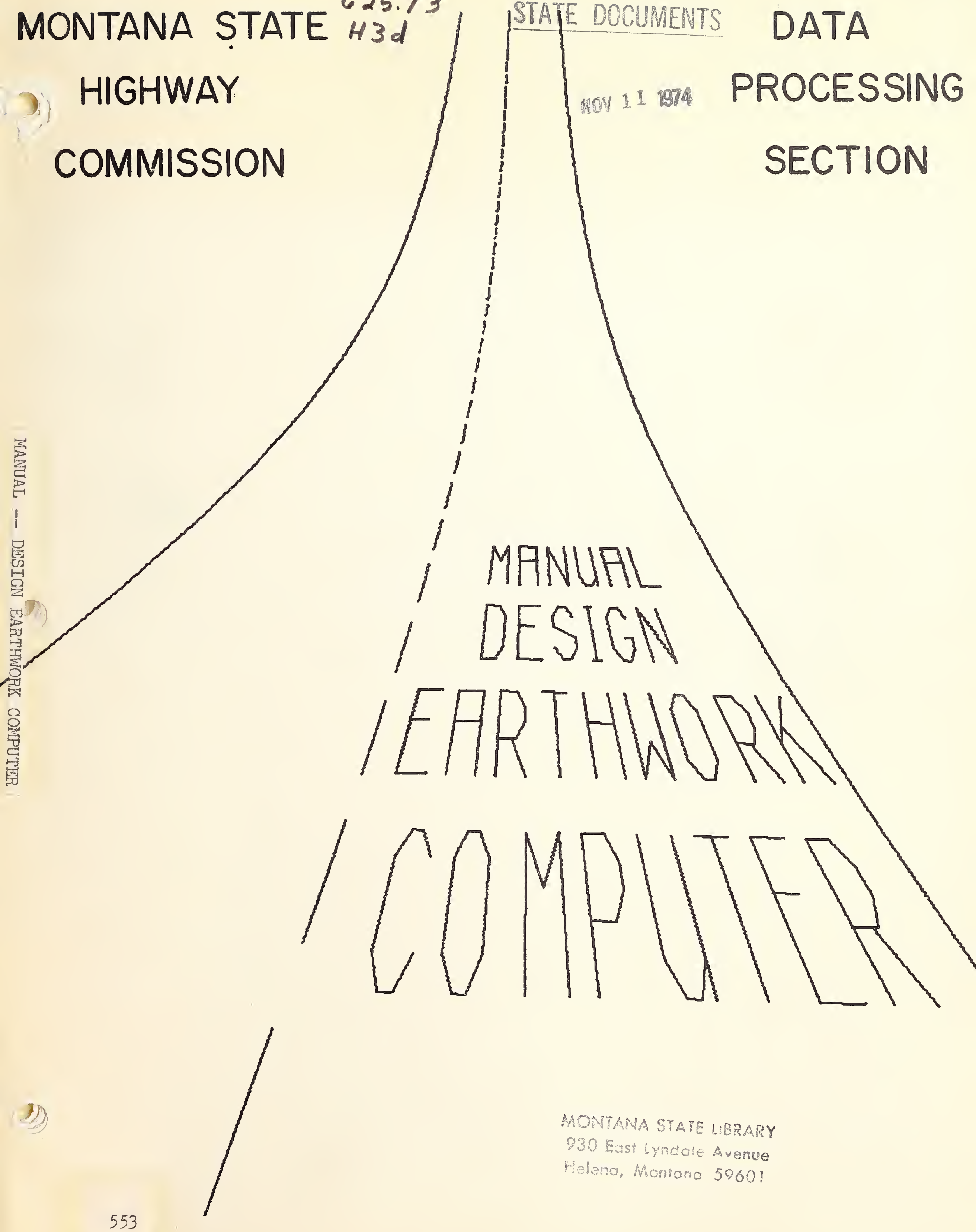
DATA
PROCESSING
SECTION



MANUAL
DESIGN EARTHWORK COMPUTER

MANUAL -- DESIGN EARTHWORK COMPUTER

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INTRODUCTION:

The purpose of this manual is to provide the link between the engineer-designer and the computerized design earthwork system currently in use at the Montana Highway Department.

Several man-years have been spent in the design, development and implementation of this system. Without close cooperation and coordination among approximately 32 state and federal agencies, this would not have been possible. Special consideration should be given to those agencies whose data processing and engineering personnel were directly involved with first implementing the system. Namely, the Highway Departments of: Utah, New Mexico, Montana, Oklahoma and South Dakota.

Although this system is not all inclusive, it is constantly being modified and improved upon to satisfy the design methods used by the Montana Highway Department. One should bear in mind that the computer is merely a tool to aid the designer to obtain an economical and efficient roadway design and that the results obtained from the computer are merely a product of his ideas and design methods.

All suggestions for modifications, improvements and additions to the system should be referred to the Data Processing Director or the Engineering Programming Supervisor. These suggestions will be reviewed and implemented when feasible. This manual will be updated and redistributed when such changes are made.

RESET DATA DPS-E09

A separate reset card is required for every template (A,B,C, or D) that is to be developed during one computer run.

The reset card defines the following criteria:

1. Template to be processed.
2. Mode of processing.
3. Interval of profile grade data.
4. Beginning station of Profile grade output.
5. Beginning and Ending stations of Template development.

The reset card data is placed on the PROFILE GRADE FORM according to the following format:

Col.	1- 5	IDENT NO. - Enter the number assigned to the terrain data associated with a project.
	6- 7	09 - This is card type identifier to the computer.
	8-16	BEGIN PROFILE - Enter terrain station number, with its associated overlapping equation number if applicable, where listed profile grade data is to commence. NOTE: THIS STATION MUST PRECEDE OR EQUAL BEGINNING STATION OF TEMPLATE GENERATION.
	21-25	INTERVAL - This field must be submitted for all except the terrain mode. It is the interval desired between stationing and may be changed at any point in the job by the use of a data code type 13 card.
	30	MODE - This column determines which of four (4) modes the program shall compute. The mode is a numeric code from 0 to 3 as follows: 0 = The Generator Mode - calculates profile data at regular intervals specified by the designer. 1 = The Terrain Mode - calculates data for each terrain (cross-section) station. 2 = The Terrain Interval Mode - calculates data for terrain sections, but only at specified intervals. 3 = The Generated Grade Mode - calculates data in the same manner as the Generator Mode; but instead of getting Profile Grade Data as output, this data is combined with the Template Data to compute sub-grade or finish grade data.

Col.	37	TEMPLATE - This code is one of the alpha characters 'A,B, C, or D'. It is important that care is taken in assigning each template code as they are used in determing which template is to be constructed first. The template which is to be constructed first should be assigned code 'A', the second 'B', etc., up to four templates per each cross section.
	43-51	BEGIN TEMPLATE STA. NO. - Enter Station number, with associated overlapping equation number if applicable, where generation of templates and quantity calculation is to begin.
	52-60	END TEMPLATE STA. NO. - Enter station number, with associated overlapping equation number if applicable, where generation of templates and quantity calculation is to end. NOTE: Terrain sections are NOT necessary for begin or end Template stations.

DPS-E09

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DATE ______________

PROJECT NO. ______________ DESIGNER ______________ DATA CHECKED BY ______________

RESET CARD

JOB NO.		*	BEG. STATION	INTERVAL	MODE	TEMP.	*	TEMPLATE BEG. STATION	*	TEMPLATE END STATION
1 5	6 7	8	9 16	21 25	30	37	43	44 51	52	53 60
12345	09		646+00.90		1	A		646+13.20	2	681+9.65

IDENT. NO.	
12345	12
1 5	6 7

PROFILE GRADE DATA

*	P.I. STATION	P.I. ELEVATION	1st. V.C.	2nd. V.C.	TEMP.	ELEV. CORR.
8	9 16	19 25	26 30	31 35	37	48 51
	646+00.00	3698.24	0		A	
	662+00.00	3691.84	800			
	685+00.00	3705.64	800			
	706+00.00	3742.60	1400			
	723+00.00	3703.84	800			
	773+00.00	3687.59	800			
1	879+83.79	3605.11	1200	800		
2	68+00.00	3664.90	1000			
2	80+00.00	3701.62	0		A	
	+					
	+					
	+					
	+					
	+					
	+					
	+					
	+					
	+					
	+					
	+					

MODE: 0-GENERATOR MODE
1-TERRAIN MODE
2-TERRAIN INTERVAL MODE
3-GENERATE GRADE MODE

* OVERLAPPING EQUATION NO.

EQUATION DATA DPS-E10

Equation cards must be submitted for each equation encountered along the terrain line and/or template lines. The maximum number of equations allowed on any individual line is twenty-four (24), nine (9) of which may be of the overlapping type, i.e., when the ahead station is less than the back station. Equations in template lines and the terrain line are entirely independent. However, if the terrain line and a template line coincide, it is necessary to list equations in both to insure equal stationing on both lines.

When the "BACK" station number of an equation is less than the "AHEAD" station number, it is considered to be a normal equation. EXAMPLE: 10 + 16.22 BK = 78 + 93.47 FWD.

When the "AHEAD" station number of an equation is less than the "BACK" station number, it is considered to be an overlapping equation. EXAMPLE: 78 + 93.47 BK = 10 + 16.22 FWD.

In order for all stationing to be unique throughout a project for a computer run, some compensation must be made in the event overlapping type equations are encountered. This is accomplished by the introduction of overlapping equation numbers to the "AHEAD" station numbers of such equations. These numbers begin with one (1) and increase by one (1) at each sequential overlapping condition. This has the effect of increasing the "AHEAD" stations of overlapping equations by 10,000. NOTE: THE OVERLAPPING EQUATION NUMBERS MUST BE SEQUENTIAL AND MUST APPEAR IN ALL OTHER DESIGN DATA.

An example of the above 78 + 93.47 BK = 10010 + 16.22 FWD. All stationing from 10010 + 16.22 would retain the extra 10,000 until the next

overlapping equation when it acquires 10,000 more stations. This method will insure unique stationing. For example: There will be only one station 79 + 00.

All equations are associated with specific lines and it is therefore necessary to denote the line associated with the equation. A separate card shall be punched for each independent equation.

The Equation card format is as follows:

Col.	1- 5	IDENT. NO. - Enter terrain identification number associated with the project.
	6- 7	10 - card type identifier for computer.
	8-16	BACK STATION - Enter "BACK" station number of equation, with its associated overlapping equation number if applicable.
	17-25	AHEAD STATION - Enter "AHEAD" station number of equation, with its associated overlapping equation number if applicable.
	37	LINE - Enter line identification of equated line. X = Terrain Line A = "A" Template Line B = "B" Template Line C = "C" Template Line D = "D" Template Line

BRIDGE EXCEPTION DATA DPS-E11

Bridge exception cards may be utilized for any exception, either specifically for a bridge, or in some instances, strictly as an exception for design analysis, etc. For instance, if you have a long project which has been previously run on the computer you may desire a rerun with output only in specific areas. Bridge exception cards can be used to advantage as computer run time can be considerably reduced. Excessive coding can also be eliminated. Bridge exception cards can also be used in certain instances where terrain sections are continuous for a long length but only intermittent construction is proposed.

The maximum number of bridge exceptions is twenty-four (24) per template.

NOTE: BRIDGE EXCEPTION CARDS ARE NECESSARY ONLY FOR EXCEPTIONS AND ARE NOT TO BE USED AT THE BEGINNING OR END OF A PROJECT.

All earthwork runs begin and end abruptly, that is with vertical faces.

It is not necessary to have terrain sections at any station governing an exception, therefore any station numbers may be entered on the Bridge Exception form.

All exceptions must be associated with the specific template and each exception must be coded independently.

The format of the Bridge Exception card is as follows:

Col.	1- 5	IDENT. NO. - Enter terrain identification number associated with project.
	6- 7	11 - Card type identifier for computer.
	8-16	BACK STATION - Enter last station where an end area is to be developed prior to an exception, or, in the case of a bridge, the first abutment station, complete with an overlapping equation number if applicable.

17-25	0.0 AREA STATION - Enter zero end area station associated with "BACK STATION" for quantities calculation, complete with an overlapping equation number if applicable.
37	TEMP - Enter template identification (A,B,C or D) for line where exception occurs.
43-51	0.0 AREA STATION - Enter zero and area station associated with "AHEAD STATION" for quantities calculation, complete with an overlapping equation number if applicable.
52-60	AHEAD STATION - Enter first station where an end area is to be developed after an exception, or, in the case of a bridge, the last abutment station, complete with an overlapping equation number if applicable.

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DPS-E10

EQUATIONS AND BRIDGES

IDENT. NO.	
12345	10
1 5	6 7

PROJECT NO. ____________ DESIGNER ____________

DATE ____________

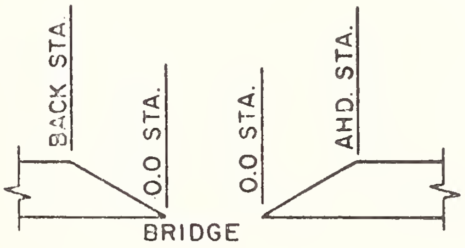
DATA CHECKED BY ____________

EQUATIONS

* 8	BACK STATION 9 – 16	* 17	AHEAD STATION 18 – 25	LINE 37
	689+27.46		689+74.19	A
	723+5015		725+6308	(
	879+8593	1	0878+7946	
1	0905+9701	1	0915+1297	)
1	0926+9310	2	0067+8436	A
	+		+	
	+		+	
	+		+	

EQUATIONS

* 8	BACK STATION 9 – 16	* 17	AHEAD STATION 18 – 25	LINE 37
	689+27.46		689+74.19	X
	879+8593	1	0878+7946	(
1	0905+9701	1	0915+1297	)
1	0926+9310	2	0067+8436	X
	+		+	
	+		+	
	+		+	
	+		+	



IDENT. NO.	
12345	11
1 5	6 7

BRIDGE OR BEGIN AND END STATIONS

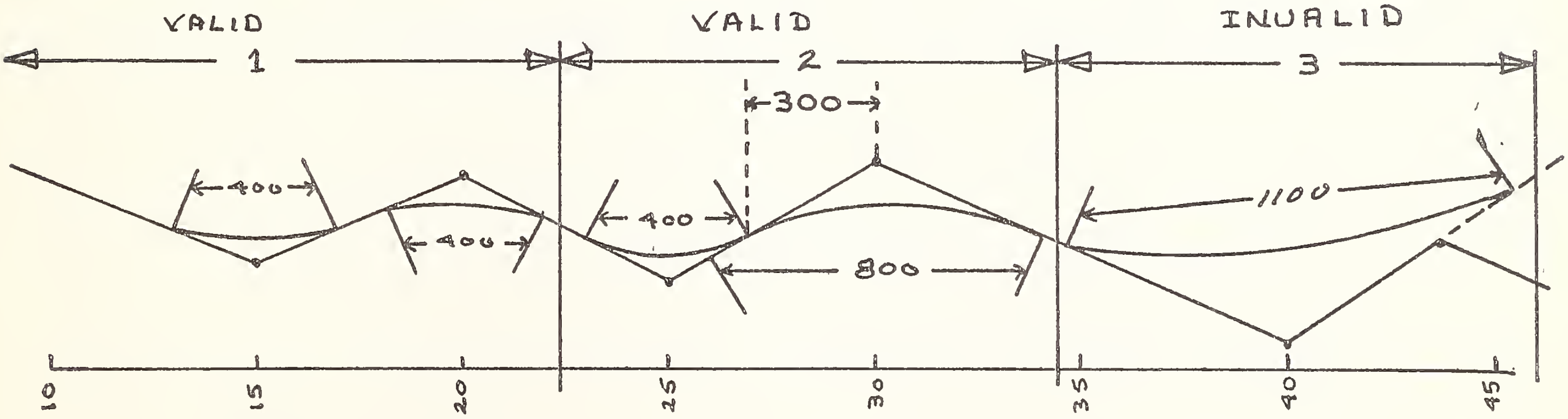
* 8	BACK STATION 9 – 16	* 17	0.0 AREA STATION 18 – 25	TEMP. 37	* 43	0.0 AREA STATION 44 – 51	* 52	AHEAD STATION 53 – 60
	660+50.00		661+07.82	A		662+08.13		663+00.00
	722+4694		726+1525	(		728+3462		728+9452
	879+0153		879+8529	)	1	0879+8131	1	0880+1227
1	0922+0000	1	0924+9300	A	1	0926+6413	2	0068+2525
	+		+			+		+
	+		+			+		+
	+		+			+		+
	+		+			+		+

* OVERLAPPING EQUATION NO.

PROFILE GRADE DATA DPS-E09

Profile grade cards govern the calculation of the vertical alignment for a project, therefore data must be sufficient to define the profile grade for the ENTIRE length.

Vertical curves may be symetrical or asymetrical, however, the lengths are defined only to the nearest foot. The lengths of the first and last vertical curves on any project must be zero (0). If the beginning or end of a project is on a vertical curve, the tangent grade before or after the curve must be defined by coding an additional station with its elevation and a length of zero (0) in the vertical curve length field. Overlapping of successive vertical curve lengths is tolerated. The back tangent of the ahead P.I. is shortened and the profile grade is computed using asymetrical curve lengths. However, the vertical curve lengths cannot overlap a vertical P.I. Example:



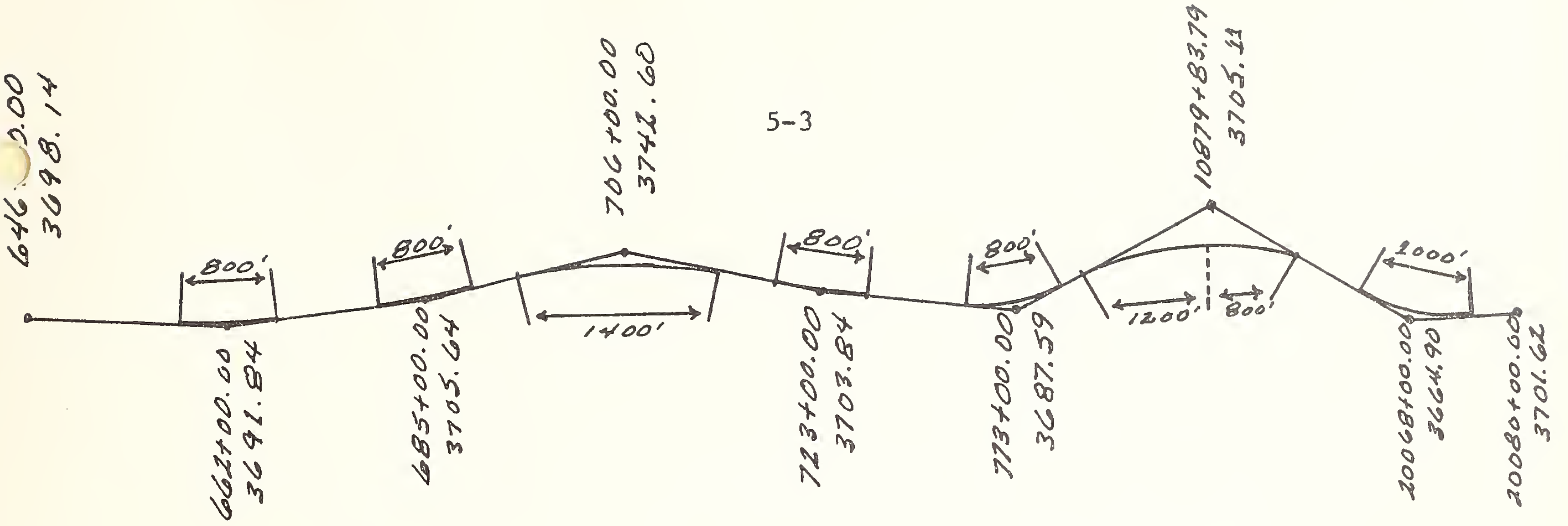
In illustration (2) the 400 ft. vertical curve is normal. The 800 ft. vertical curve will work with the back tangent length changed to 300 ft. In illustration (3) the 1100 ft. curve will not work as it overlaps the ahead P.I.

The maximum number of vertical P.I. Stations is ninety-nine (99) for each template.

NOTE: VERTICAL GRADES ARE NOT PERMITTED.
If changes in typical sections are encountered no abrupt change may occur. Maximum allowable grade is ± 9999.99%. All grades are computed from P.I. to P.I. and a difference in P.I. station numbers of one (1) foot between successive P.I.'s will eliminate an error condition.

Col.	1-5	IDENT NO. - Enter Terrain identification number for the project.
	6-7	12 - Card Type identifier for computer.
	8-16	P.I. STATION - Enter station number of vertical P.I., complete with overlapping equation number when applicable.
	19-25	ELEVATION - Enter finished grade elevations for each P.I.
	26-30	FIRST V.C. - If the vertical curve is symetrical enter total length of desired curve in this field. If the vericial curve is not symetrical enter the length preceding the vertical P.I.
	31-35	SECOND V.C. - Entry in this field necessary only when vertical curve is not symetrical. In such cases enter the length of curve following the vertical P.I. THIS FIELD IS USUALLY BLANK.
	37	TEMP - Enter template identification code (A,B,C, or D) of profile grade being defined.
	48-51	ELEV. CORR. - Enter elevation correction to be applied to listed P.I. elevation. If listed P.I. elevation is to be lowered be sure to code a minus algebraic sign (-) in front of correction value. A maximum of ±9.99 feet is allowed.

Profile Grade data should be coded on separate forms for each template line to insure a Reset Card is punched for each.


646 .00
3698.14
800'
662+00.00
3691.84
800'
685+00.00
3705.64
1400'
706+00.00
3742.60
800'
723+00.00
3703.84
800'
773+00.00
3687.59
1200'
800'
10879+83.79
3705.11
1000'
20068+00.00
3664.90
20080+00.00
3701.62

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DPS-E09

DATE ______________

PROJECT NO. ______________ DESIGNER ______________ DATA CHECKED BY ______________

RESET CARD

JOB NO. 1–5	6 7	* 8	BEG. STATION 9–16	INTERVAL 21–25	MODE 30	TEMP. 37	* 43	TEMPLATE BEG. STATION 44–51	* 52	TEMPLATE END STATION 53–60
12345	09		646+00.00		1	A		646+13.20	2	0068+19.65

IDENT. NO. 1–5	6 7
12345	1 2

PROFILE GRADE DATA

* 8	P. I. STATION 9–16	P. I. ELEVATION 19–25	1st. V.C. 26–30	2nd. V.C. 31–35	TEMP. 37	ELEV. CORR. 48–51
	646+00.00	3698.24	0		A	
	662+00.00	3691.84	800			
	685+00.00	3705.64	800			
	706+00.00	3742.60	1400			
	723+00.00	3703.84	800			
	773+00.00	3687.59	800			
1	0879+83.79	3705.11	1200	800		
2	0068+00.00	3664.90	1000			
2	0080+00.00	3701.62	0		A	

ODD STATIONS AND/OR CHANGE INTERVAL DATA DPS-E13

A maximum of twenty-four (24) odd stations per template (roadway) is permissible. This entry is used to locate points not covered by cross-sections, normal interval and/or to change the normal interval for a generator, terrain interval, or generated grade mode.

Col.	1- 5	IDENT NO. - Enter terrain identification number for the project.
	6- 7	13 - Card type identifier for the computer.
	8-16	Cross section stationing with overlapping equation number if applicable.
	21-25	INTERVAL - Enter interval desired if change is to be made. If odd station, leave blank.
	37	TEMPLATE - Enter template code 'A,B,C, or D'.
	38-41	DESCRIPTION - Alphabetic description used to identify odd station. Examples: 'PIPE' or "CMP'.

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DPS-E13

ODD STATIONS AND INCREMENT

IDENT. NO.	
12345	1 3
1 5	6 7

PROJECT NO. ______ DESIGNER ______

DATA CHECKED BY ______ DATE ______

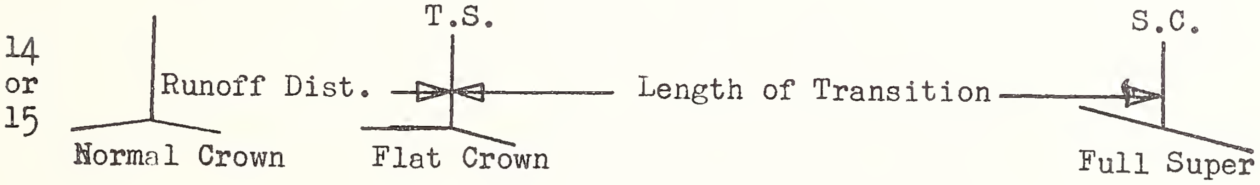
*	STATION	INTERVAL	TEMP.	DESCRIPTION
8	9 16	21 25	37	38 41
	646+00.00	100.00	A	
	702+0090			PIPE
	843+0440			RR
	850+5000	5000		
2	0061+0000	10000	A	
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			
	+			

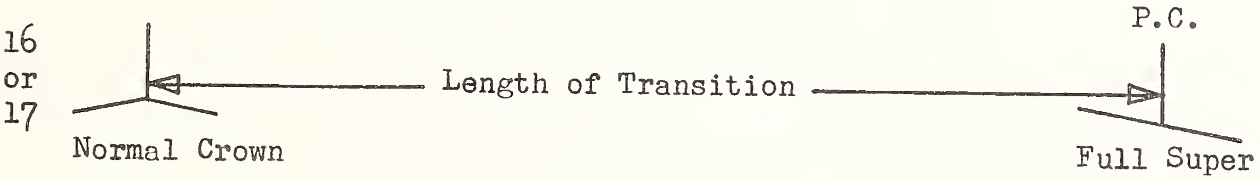
*OVERLAPPING EQUATION NO.

SUPERELEVATION DATA DPS-E16

Superelevation must be used for proper control of template superelevation for two (2) lane roadways. The use of these entries insures the proper superelevation in relation to the pivot point.

The station for either code 14 or 16 is the point at which the maximum super begins. The difference between codes 14-15 and codes 16-17 is that codes 14-15 are used for spiral curves and run the transition length from flat (.00%) to full super. Codes 16-17 are used for circular curves and run the transition length from normal crown to full super.


14
or
15
Runoff Dist.
T.S.
Length of Transition
S.C.
Normal Crown
Flat Crown
Full Super


16
or
17
Length of Transition
P.C.
Normal Crown
Full Super

In 14-15 codes, the distance from flat to normal crown is computed at the same rate as from flat to full super unless it extends over 200 feet. In this case the maximum runoff is fixed at 200 feet.

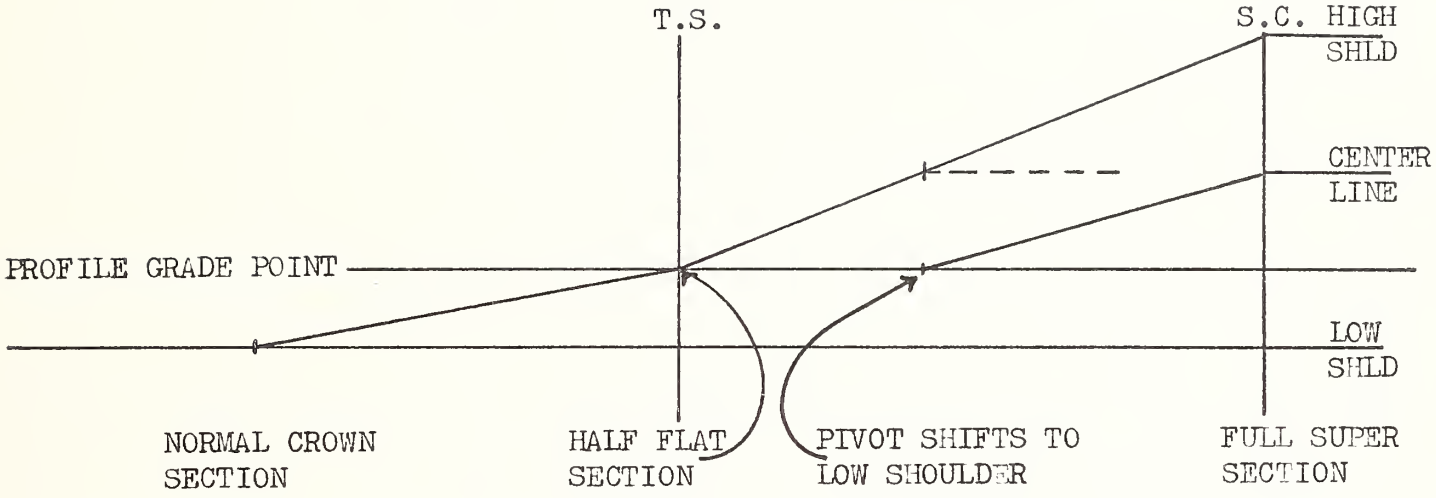
For both cases if the transitions overlap, the program is set up to handle it depending on certain factors. If where the transitions overlap, the rate of super are less than flat (.00%) the first rate is carried until the transitions intersect, at which time the new rate of super is picked up.

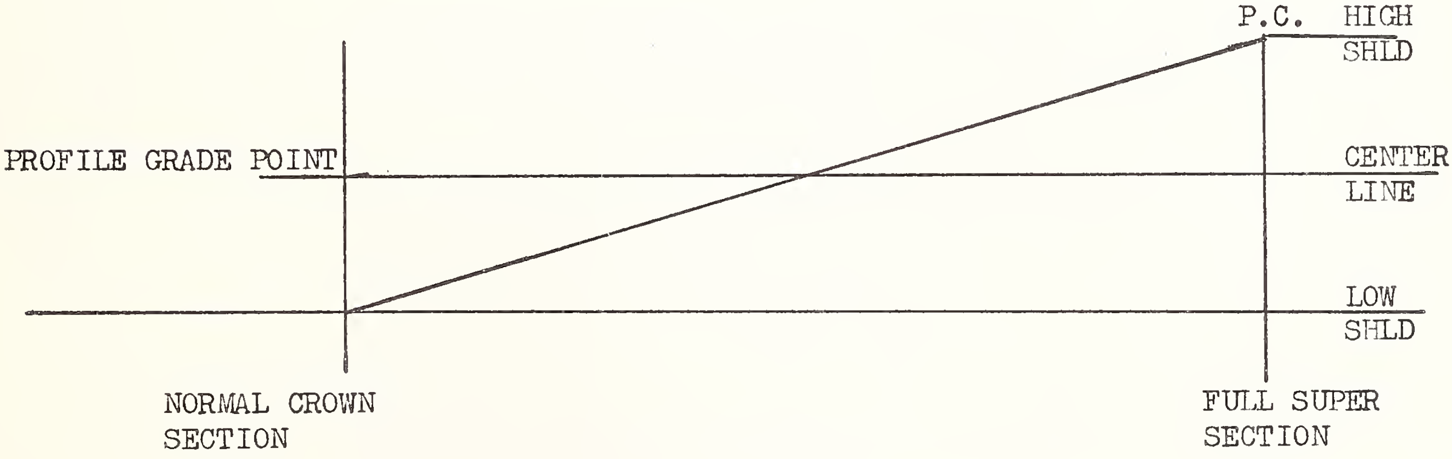
If they overlap between flat and full super, the direction of the two curves affect the method of handling. If the directions are opposite, the transition lengths are adjusted so they intersect at flat. If the directions are the same, the maximum rates of super are compared. If the rates of super are the same, the maximum rate is held through the transition lengths. If the rates are unequal, the lesser is held until it intersects the transition of the greater.

The maximum number of entries per template is 98.

Col. 1- 5	IDENT NO. - Enters terrain identification number for the project.
6	1 - Permanent card type identifier for computer.
7	SUPER IDENTIFIER - Enter 4 to 7 to identify which type of super is to be applied. The selections are as follows: 4 - Begin Super for spiral curves. 5 - End Super for spiral curves. 6 - Begin Super for circular curves. 7 - End Super for circular curves.
8-16	STATIONING - Enter template stationing, complete with overlapping equation number, at which full super is to begin or end. For spiral curves this is the S.C. and the C.S. For circular curves this is the P.C. and the P.T.
23-25	CROWN - Enter normal crown of template section.
26-30	TRANSITION LENGTH - Enter the length of transition. For spiral curves this is the length of spiral.
33-35	SUPER - Enter amount of superelevation to be applied to curve.
36	CURVE DIRECTION - Enter the direction the curve will turn.
37	TEMPLATE - Enter template code corresponding to listed offset stationing.

NOTE: If project begins in a curve, it is necessary to code in a begin super card with stationing behind the first desired station.


T.S.
S.C. HIGH SHLD
CENTER LINE
PROFILE GRADE POINT
LOW SHLD
NORMAL CROWN SECTION
HALF FLAT SECTION
PIVOT SHIFTS TO LOW SHOULDER
FULL SUPER SECTION


P.C. HIGH SHLD
PROFILE GRADE POINT
CENTER LINE
LOW SHLD
NORMAL CROWN SECTION
FULL SUPER SECTION

DPS-E16

STATE OF MONTANA
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SUPERELEVATION DATA

IDENT. NO.	
12345	1
1 5	6

PROJECT NO. ______ DESIGNER ______ DATA CHECKED BY ______ DATE ______

4 or 5 6 or 7	*	STATION	CROWN	TRAN. LGTH.	SUPER	L or R	TEMP.
7	8	16	23 25	26 30	33 35	36	37
6		646+00.00	020	150	050	L	A
7		651+00.00	020	150	050	L	A
4		879+00.00	020	200	070	R	A
5	1	0885+00.00	020	200	070	R	A
6	1	0925+00.00	020	100	050	R	A
7	2	0070+00.00	020	100	050	R	A
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					

6- BEG. SUPER
7- END SUPER

* OVERLAPPING EQUATION NO.

4 or 5 6 or 7	*	STATION	CROWN	TRAN. LGTH.	SUPER	L or R	TEMP.
7	8	16	23 25	26 30	33 35	36	37
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					
		+					

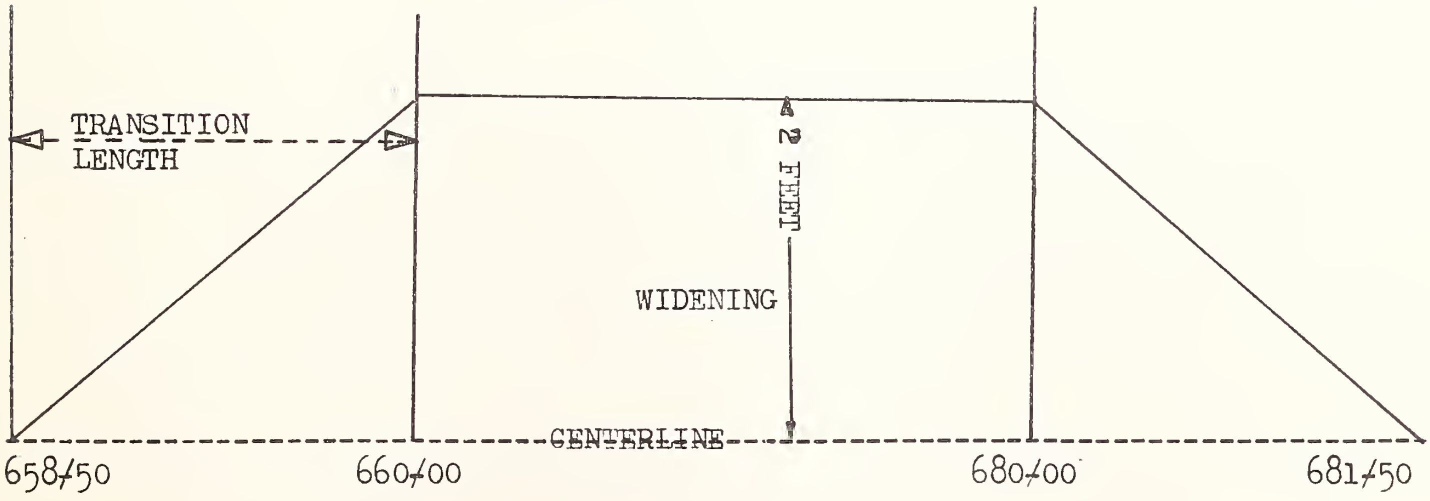
ROADWAY WIDENING DATA DPS-E18

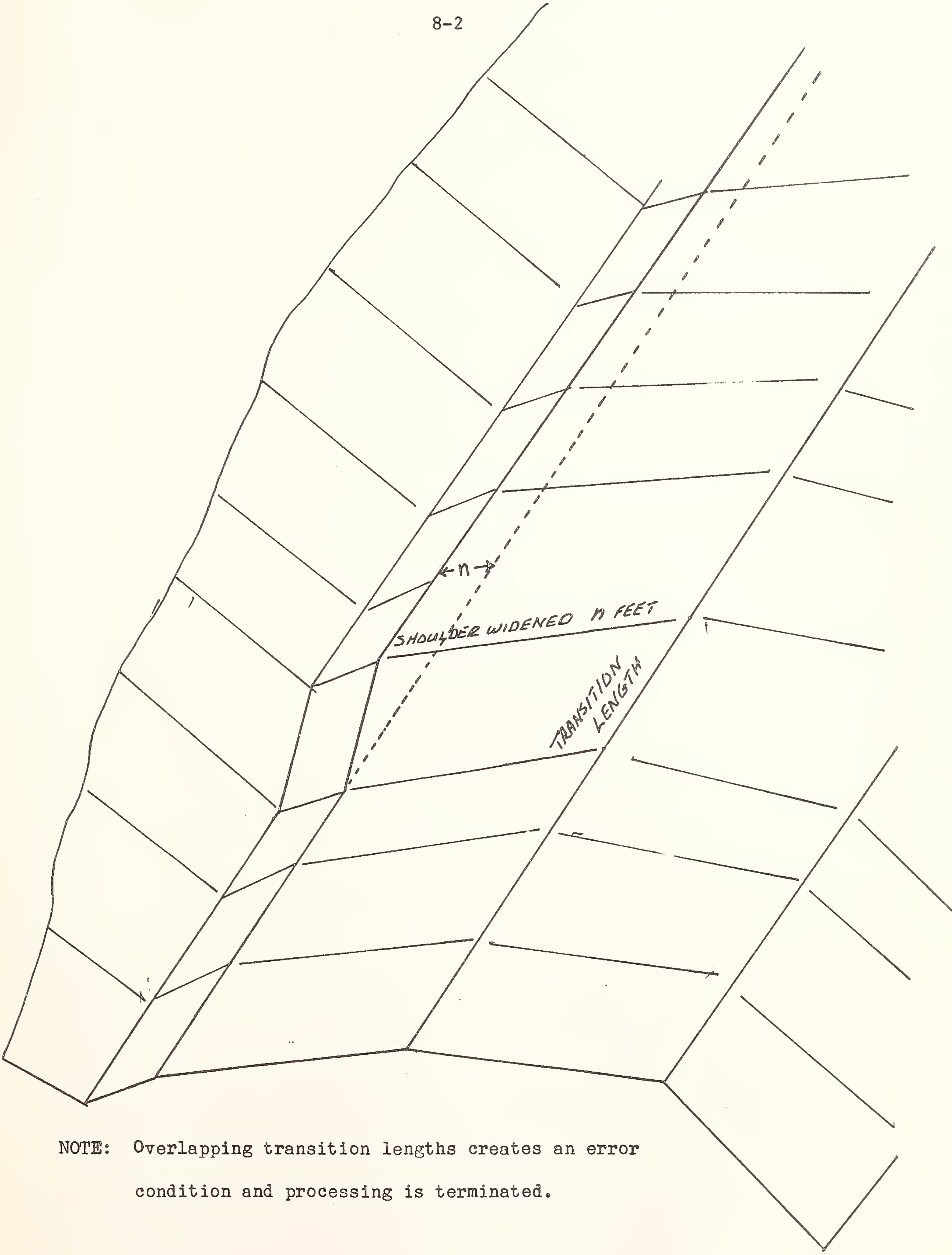
Roadway widening may be used to extend the template through various parts of a project. This allows the designer to taper the shoulder template section out to a desired width at the same slope for a specified distance and back again without changing the template design.

A maximum of 99 begin and end widening cards may be used per template.

Col.	1- 5	IDENT NO. - Enter terrain identification number for the project.
	6- 7	18-Card type identification for the computer.
	8-16	STATION - Enter template station, complete with overlapping equation number, if applicable, where the widening begins or ends its maximum width.
	21-24	WIDENING - Enter the amount of widening desired.
	26-30	TRANSITION LENGTH - Enter the length of transition for the widening.
	36	LEFT OR RIGHT - Enter side of template to be widened.
	37	TEMPLATE - Enter template code.
	42	BEGIN OR END - Enter the code 'B' or 'E' to designate the beginning or ending of widening.

EXAMPLE:




←n→
SHOULDER WIDENED n FEET
TRANSITION LENGTH

NOTE: Overlapping transition lengths creates an error condition and processing is terminated.

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DPS-E18

ROADWAY WIDENING

IDENT. NO.	
1 2 3 4 5	1 8
1 5	6 7

PROJECT NO. ____________ DESIGNER ____________

DATA CHECKED BY ____________ DATE ____________

*	STATION	WIDENING	TRANSTION LENGTH	L or R	TEMP.	B or E
8	9 16	21 24	26 30	36	37	42
	660+00.00	2.0	150	L	A	B
	680+0000	20	150	L	A	E
	+					
	+					
	+					
	+					
	+					
	+					
	+					
	+					
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	+					
	+					
	+					
	+					
	+					
	+					
	+					
	+					

*OVERLAPPING EQUATION NO.

OFFSET DATA DPS-E19

Offset data is necessary when a template line does not coincide with the terrain line in order to reference the development of a completed template in its true relationship with the terrain line.

A uniform transition will be made in terrain and template stationing and in offset distances between successively listed data. NOTE: IT IS ALWAYS NECESSARY TO LIST THE LAST STATION WHERE OFFSETS ARE DESIRED. For instance, if a constant offset is to be used throughout a project, offset cards must be punched for *both* the beginning and ending stations.

Abrupt changes, that is two offset distances at the same station, are *not* permitted. Successive entries for offset data *must* have at least one-tenth (.1) of a foot station separation.

Offset distances listed on profile grade printed output will be indicated as negative (-) if on the left of the terrain centerline and no algebraic sign will be shown for those on the right.

Cards may be punched, on request, by the HALO (Horizontal Alignment with Offsets) program for direct input into the earthwork program.

The format of the Offset Card is as follows:

Col.	1- 5	IDENT NO. - Enter terrain identification number for the project.
	6- 7	19 - Card type identifier for the computer.
	8-16	CROSS SECTION STA. - Enter *terrain* station number at which offset distance transition is to begin or end, complete with overlapping equation number if applicable.
	17-25	SHIFTED OR OFFSET STA. - Enter *template* station number that is perpendicular to the associated listed terrain station, complete with overlapping equation number if applicable.

26-30	SHIFT OR OFFSET DISTANCE - Enter distance between terrain line and template line.
36	L or R - Enter letter L if template line is left of terrain line and enter letter R if template is right of terrain line.
37	TEMP - Enter template code corresponding to listed template offset station.

DPS-E19

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DATE ____________

DATA CHECKED BY ____________

OFFSET DATA

PROJECT NO. ____________

DESIGNER ____________

IDENT. NO.	
1 2 3 4 5	1 9
1 … 5	6 7

☒ TEMP. OFFSET

☐ X-SECTION & SHIFT

*	CROSS SECTION STA.	*	SHIFTED OR OFFSET STATION	SHIFT OR OFFSET DISTANCE	L or R	TEMP
8	9 … 16	17	… 25	26 … 30	36	37
	646+00.00		646+00.00	100.0	L	A
2	0068+1965	2	0068+1965	1000	L	A
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			
	+		+			

*OVERLAPPING EQUATION NO.

TEMPLATE DATA DPS-E24

The shape of the template of each line is defined on the Templates Form. Each template must have definition from beginning station to ending station as shown on the RESET (09) Card and is always defined from LEFT to RIGHT.

Each template definition may contain up to 15 segments, (3 lines). When it is necessary to use more than one line to describe the template, the contents of columns 8-27 and 29-37 are repeated on the next entry, and card number "2" or "3" entered in column 28, "CD.NO." Templates are described by entering the slopes in ft/ft with a plus to designate a slope in a positive (upward) direction away from the profile grade point or a minus to designate a slope in a negative (downward) direction away from the profile grade point. Distances are horizontal distances. Slopes and distances may also be referenced to a vertical plane rather than a horizontal plane by including a "V" in the slope option column.

The number of segments defining a particular template (A,B,C, or D) must be uniform throughout the entire length of the project unless there is an abrupt change, then the distance between sections must be coded less than or equal 0.1 ft. Dummy segments of zero (0) horizontal distance are permitted but must be accompanied by a valid slope (non-zero).

The format of the TEMPLATE CARD is as follows:

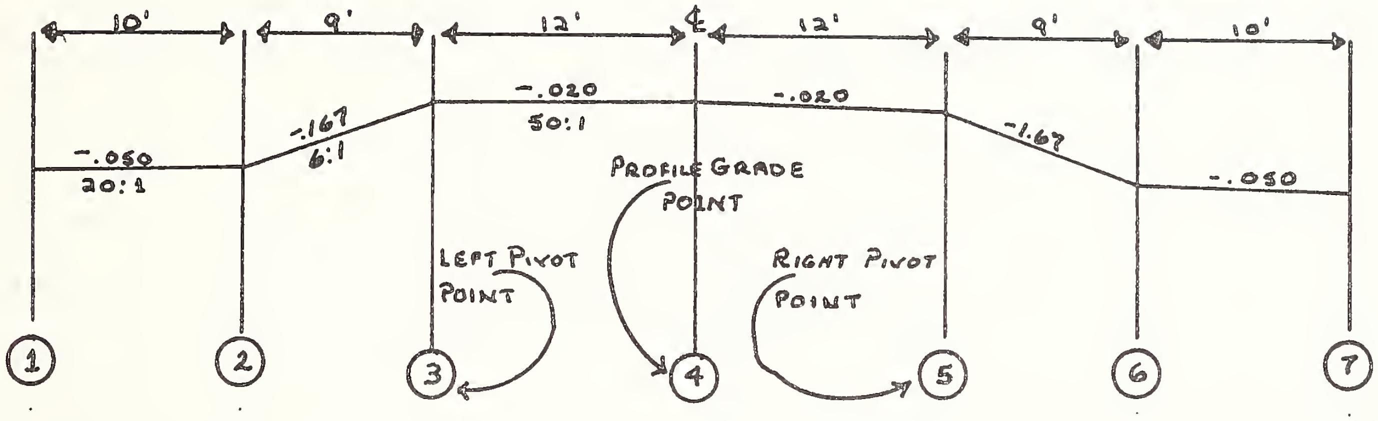
Col.	1- 5	IDENT. NO. - Enter the number assigned to the terrain data associated with the project.
	6- 7	24 - This is card type identifier to computer.
	8-16	STATION - Enter station number at which template values begin, using overlapping equation number if applicable.

17-25	STATION - Enter station number at which template values end. May be left blank if template values are instantaneous.
26	TEMP - Enter template code (A,B,C, or D).
27	Alphabetic "F" or "S" designating template is on Finished grade or Subgrade.
28	CARD NUMBER - Normally 1 but 2 or 3 entered when more than five points or ten points are necessary to describe the template.
29-31	SURFACING DEPTH - Defines the distance between finished and subgrade unless previously defined template is being recalled, in which case, template store number is entered in columns 30 & 31.
32-33	GRADE POINT - Point No. on template at which profile grade is carried.
34-35	P.P. LEFT - Point No. on template about which superelevation is to be rotated on curves to the left.
36-37	P.P. RIGHT - Point No. on template about which superelevation is to be rotated to the right.
38-77	TEMPLATE SEGMENT DESCRIPTION FIELDS - 38 = Template slope option - Blank if normal, "H" if superelevation is not to be applied, "V" if slope and distance is referenced to a vertical plane. 39 = Plus or minus designating direction of slope. 40-42 = Slope in ft/ft. 43-45 = Horizontal distance of slope unless overridden by "V" slope option, similar entry patterns in Columns 46-53, 54-61, 62-69 and 70-77.
79-80	STORE - Enter any value 01-40 to store template definition. Blank indicates template storage not desired.

The program assumes Point Number 1 on every Template Line to be on the left of the first template segment defined and successive points numbered from left to right. The profile grade point is the point number on the template to be referenced to the profile grade as defined by P.I. (E12) data. It is also the point to which offset distance is referenced by the offset (E19) data. Pivot points are the points about which superelevation is revolved.

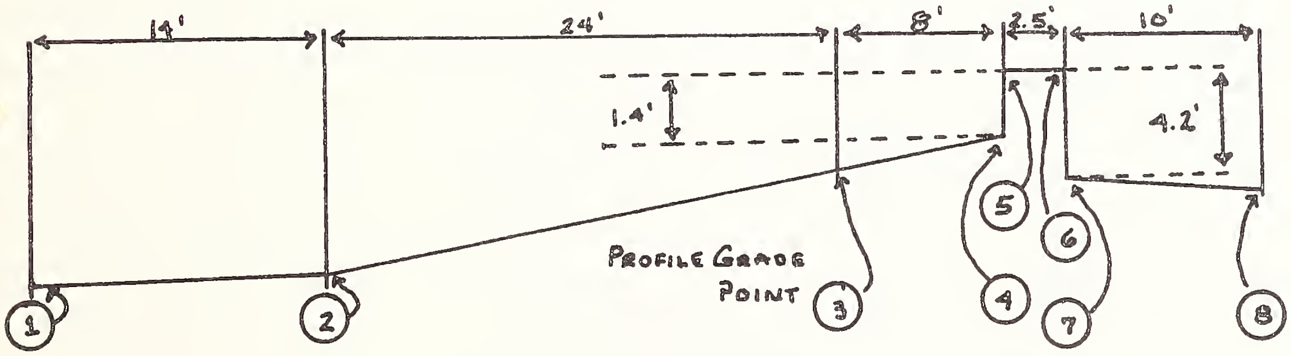
EXAMPLE #1 (Slope Definitions)

See Plate #1 Example #1


10'
9'
12'
℄
12'
9'
10'
-.020
50:1
-.020
-.167
6:1
-.050
20:1
-1.67
-.050
PROFILE GRADE POINT
LEFT PIVOT POINT
RIGHT PIVOT POINT
①
②
③
④
⑤
⑥
⑦

EXAMPLE #2 (Vertical)

See Plate #1 Example #2


14'
24'
8'
2.5'
10'
1.4'
4.2'
PROFILE GRADE POINT
①
②
③
④
⑤
⑥
⑦
⑧

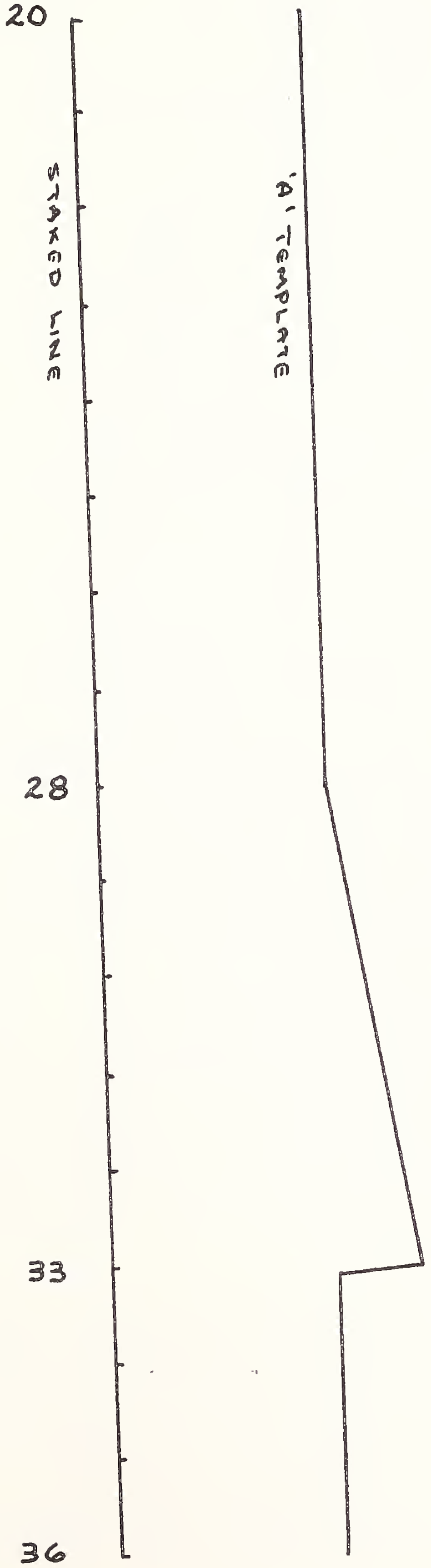
Slopes and distances between successive stations will transition, therefore, the engineer may introduce ramp tapers, super transition, special ditch slopes, etc., as part of the template. Stationing may be represented in one of two ways:

1. If the template is to remain constant between station limits, the beginning station is entered in columns 8-16 and the ending station in columns 17-25.

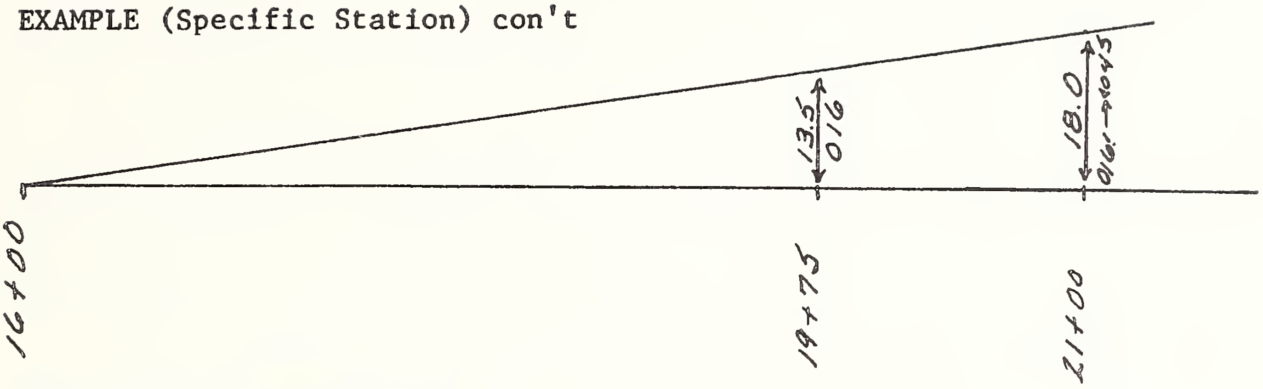
See Plate #1 Example #1

2. If the template values shown are valid only at a given station, the station is entered in columns 8-16 with columns 17-25 left blank. Transitioning is done between the last station previously entered and this station.

EXAMPLE: (SPECIFIC STATIONS)
SEE PLATE #1
EXAMPLE #3


20
STAKED LINE
'A' TEMPLATE
28
33
36

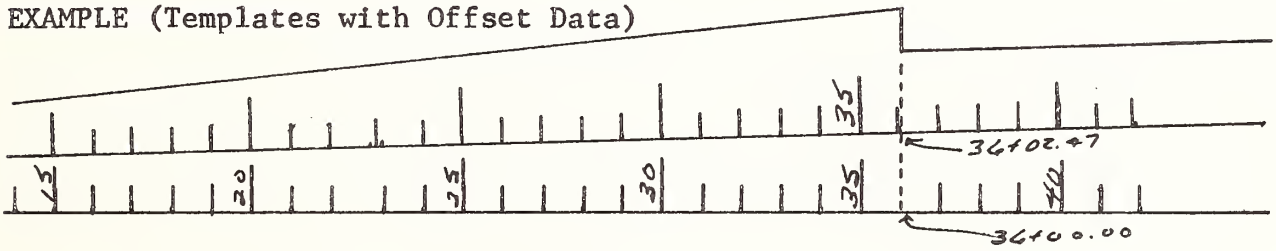
EXAMPLE (Specific Station) con't



See Plate #1 Example #4

Stationing on the Template Form is template line stationing as defined by offset cards. If no offset cards are present, identical stationing is assumed for template line and the cross section line and the profile point assumed to coincide with the cross section line. If a certain template condition is desired to be shown at a given cross section, any difference in stationing must be taken into consideration.

EXAMPLE (Templates with Offset Data)



CROSS SECT. STA.	SHIFT OR OFFSET STA.	DIST.	L or R	TEMP
10+00.00	10+00.00	20.0	L	A
36+00.00	36+02.47	32.0	L	A

If the end of taper is set at Terrain Section station 36+00.00, the template stationing entered on the "24" card must be 36+02.47 or slightly greater. If the end of the taper is entered as, say station number 36+00.97, the program computes an equivalent terrain station number from the offset card,

in this case 35 + 98.50. The template developed at terrain station 36 + 00.00; therefore, will not reflect the additional widening since the data, in fact, indicates that no widening exists on the template at this cross section station. REMEMBER, TEMPLATE FORM STATION ENTRIES ARE TEMPLATE LINE STATIONING AND NOT TERRAIN LINE STATIONING.

No repetition of stationing is permitted between successive entries. When sudden changes in template distances or slopes occur, successive station entries must be two-hundredths (0.02) foot or less. Quantities will not be affected by this procedure, however, this will not produce end areas unless there are terrain sections at those stations. Only one template and one end area is developed per Terrain Section.

STORE AND RECALL

If a particular template definition is to be used in another area of the project, it may be stored and later recalled. Templates may be stored with any number 01 to 40 by entering the store number in columns 79 and 80 of the first line to describe the section and recalled by entering the store number in columns 30 and 31 at the station or stations where the typical section is in effect again. Leave the remainder of the line blank. One line is all that is required to recall a typical that took 3 lines to describe.

PLATE #1

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DPS-E24

TEMPLATE

PROJECT NO. ________ DESIGNER ________ DATA CHECKED BY ________ DATE ________

IDENT. NO.	
12345	24
1 5	6 7

□ SLOPE OPTION
- H = HOLD SLOPE IN CURVE
- V = SLOPE AND DISTANCE IS ON A VERTICAL PLANE RATHER THAN HORIZONTAL

EXAMPLE

No.	STATION *	to STATION *	TEMP.	S/F	CD. NO.	SURF DEPTH **	PF GRADE POINT	P.P. LEFT	P.P. RIGHT	SLOPE □ ±	DIST	SLOPE □ ±	DIST	SLOPE	DIST	SLOPE □ ±	DIST	SLOPE □ ±	DIST	STORE
	8 9 16	17 25	26	27	28	29 31	32	34	36	38	43	46	5		59		67	70	75	79
1	646+13.20	20068+19.56	A	S	1	1.05	04	03	05	-050	100	-167	090	-020	120	-020	120	-167	90	
	+	+	A	S	2	105	04	03	05	-050	100									
2	STA	STA	A	S	1	105	03	02	04	-010	140	-016	240	016	80	V 000	14	-042	25	
	+	+	A	S	2	105	03	02	04	V 000	-42	-050	100							
3	20+0000	28+0000	A	S	1	095	03	02	04	-016	000	-016	440	016	80					01
	33+0000	+	S	S	1	SSS	03	02	04	-016	140	-016	440	016	80					
	33+0001	36+0000	A	S	1	01														
4	16+0000	+	A	S	1	105	03	02	04	-016	000	-016	280	016	200					
	19+7500	+	S	S	1	S	S	S	S	-016	135	-016	280	016	200					
	21+0000	+	A	S	1	105	43	02	04	-016	180	-016	280	016	100					
	+	+																		
	+	+																		
	+	+																		

** RECALL NUMBER — NN

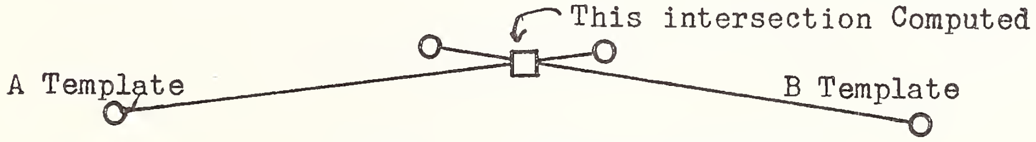
MEDIAN DESIGN DATA DPS-E26

Median design cards provide a flexible means of shaping the median between templates. A median may be placed between any two adjacent templates, (i.e., A and B) but it cannot be shifted to lie between two other templates (i.e., A and C).

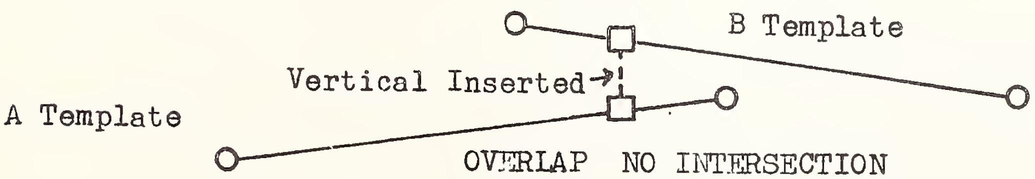
Three links, or median segments, are provided for each side of the median to describe the desired shape of the median, each link being defined by a positive horizontal distance and a positive or negative vertical distance. The final shape of the median is determined by satisfaction of one of three conditions.

1. Templates Overlap

   A check is first made to determine whether or not an overlap exists between the right shoulder of the left template and the left shoulder of the right template. If an overlap exists, a further check is made to determine if the two templates intersect and if so, the intersection is computed. If no intersection is found, a vertical line is inserted joining the two template sections at the midpoint of the overlap.



OVERLAP TEMPLATES INTERSECT

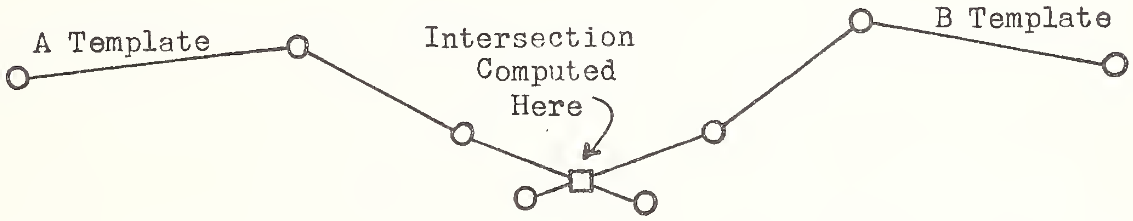


OVERLAP NO INTERSECTION

If the templates overlap, no further median design action is taken.

2. Median Segments Intersect

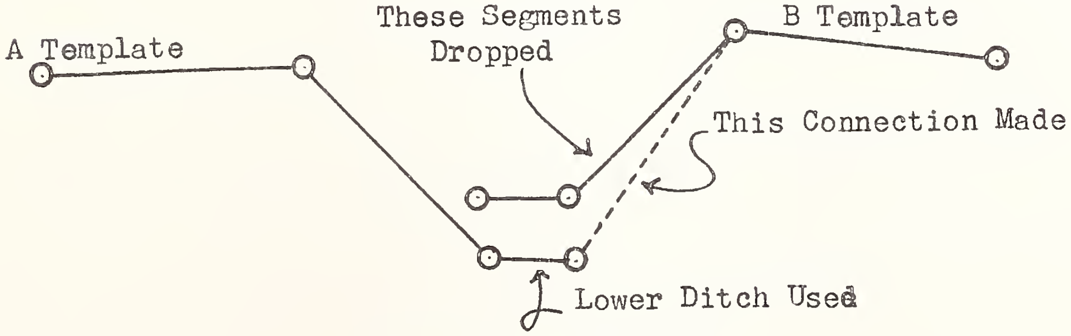
If templates do not overlap, a check is then made for intersection of any of the segments of the left with the segments on the right. This facility enables the engineer to produce V-Bottom ditches, variable-width crowned sections, etc. Horizontal and vertical distances used to describe the intersecting segments should be greater than the maximum distance to be encountered. See examples.


A Template
Intersection
Computed
Here
B Template

MEDIAN SEGMENTS INTERSECT

3. Connect Lower Segment with Opposite Shoulder

If conditions in 1 or 2 above do not exist, then the median segments giving the lowest elevation are used and the segments for the opposite median are ignored. The end of the controlling (lowest) median segment is then connected to the opposite shoulder. If the end of the segment is beyond the shoulder, the previous point is used unless it in turn is beyond the shoulder. This process will continue to a logical end of connecting shoulder to shoulder.


These Segments
Dropped
A Template
B Template
This Connection Made
Lower Ditch Used

LOWER SEGMENTS USED

MEDIAN TRANSITIONS

If horizontal and/or vertical distances between successive entries differ, linear transitioning is applied between the listed station limits. Special ditches, variable slopes, variable widths, etc., may be obtained using this automatic feature.

MEDIAN EXTENTS AND SLOPE SELECTIONS

Median extents are defined by the stations listed on the Median Design Form. The median may begin and end at any point on the project. If an area within the limits of the project is desired to be omitted between successive entries, a "1" may be inserted in the "Skip" column. This causes the program to skip to the next station listed without applying any median design.

MEDIAN STATIONING IS BASED ON TERRAIN LINE STATIONING AND NOT TEMPLATE STATIONING

When median design is applied between A and B templates, the resultant combined template is stored and considered to be only Template A; therefore, ANY SLOPES TO BE APPLIED IN MEDIAN EXTENTS AT THE OUTER SHOULDERS MUST BE LISTED UNDER TEMPLATE A SELECTIONS. If there are areas within the project where median design is not applied, Template A slopes will fall in the median area and Template B slopes will be selected for the other lane; therefore, station limits in slope selections must be related to station limits of median extents. If differences exist between stationing on the Terrain Line and the Template Line (i.e., when offsets occur), this must be taken reflected in the stationing of median ends and slope selection beginning. Median data is based on terrain stationing; slope selection is based on template stationing.

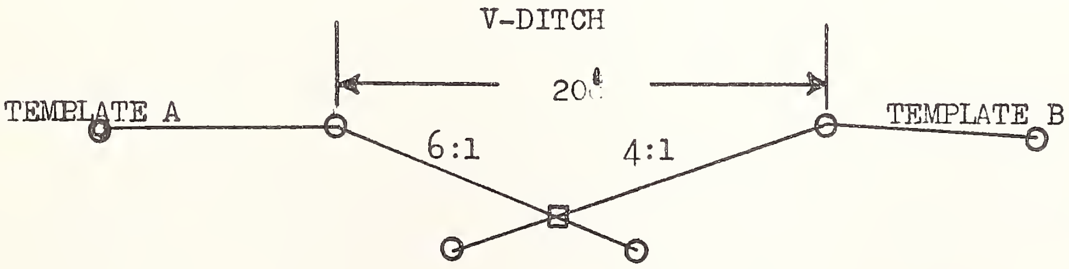
MEDIAN CARD FORMAT

The format for the Median Design Card is as follows:

Col.	1-5	IDENT NO. _ Enter the number assigned to the terrain data associated with the project.
	6-7	26 - This is card type identifier to the project.
	8-16	BEGINNING or END STATION - Terrain station number for beginning or end of median development or transition.
	17-40	The horizontal and vertical distances describing the median segments to be used with the left template.
	41-64	The horizontal and vertical distances describing the median segments to be used with the right template.
	65	SKIP CHECK - A "1" in this column will omit median design between the station on this entry and the station on the next entry. A "Blank" denotes median continuation.
	66	LEFT - Enter code of template on the left.
	67	RIGHT - Enter code of template on the right.

EXAMPLES OF MEDIAN CONFIGURATIONS

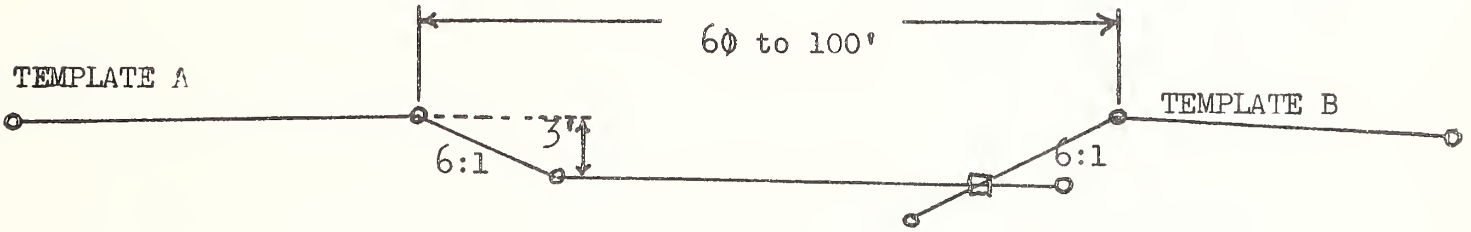
Following are some configurations within the capabilities of median design. They are not intended to limit the engineer in possible uses, but to illustrate some of the results obtained. Accompanying each configuration is the design data producing it.



See Plate #2, Example #1

NOTE: The horizontal distances chosen are arbitrary to assure an intersection. The vertical distances are negative to denote downward slopes and produce slopes of 6:1 and 4:1.

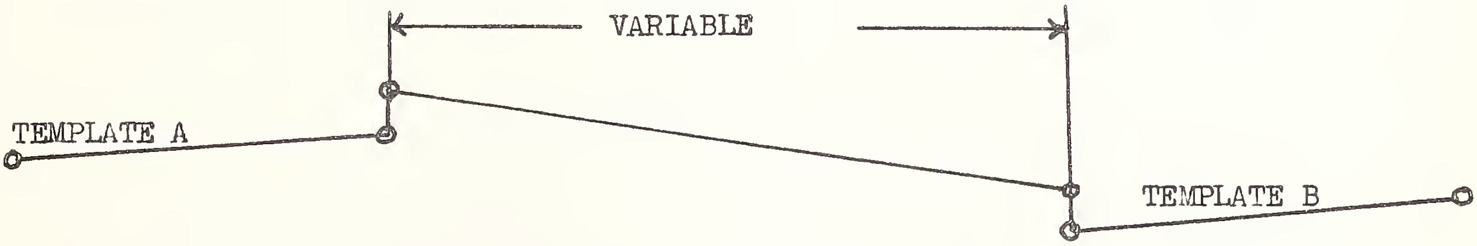
FLAT BOTTOM, VARIABLE WIDTH DITCH



See Plate #2 Example #2

The first segment determines the ditch depth of 3 feet at 18 feet or a 6:1 slope. The 80' width of the ditch is arbitrary, sufficient to produce an intersection. The 6:1 slope on the right is produced by 24' and -4'; the 24 again arbitrary to produce an intersection.

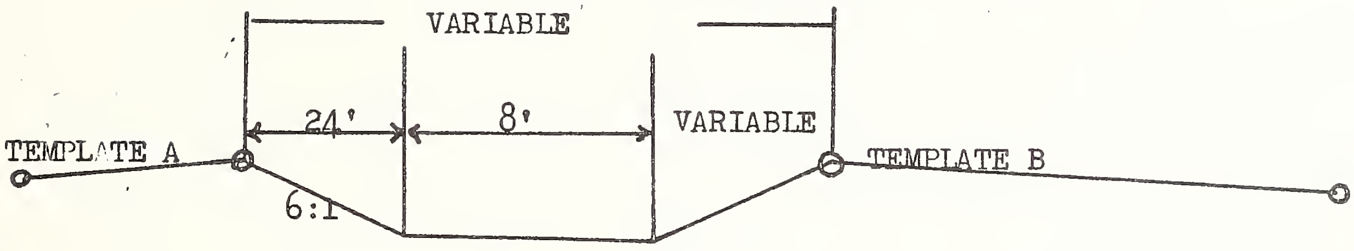
CROWN MEDIAN, VARIABLE TOP OF CURB



See Plate #2 Example #3

Note that no data is necessary if the curbs are included as part of the template. This effect would not be produced if the vertical faces were included as median segments. Since no intersection exists, the top of curb of B template would be used, (it is lower), and a connection made from top of curb on B template to top of curb of A template.

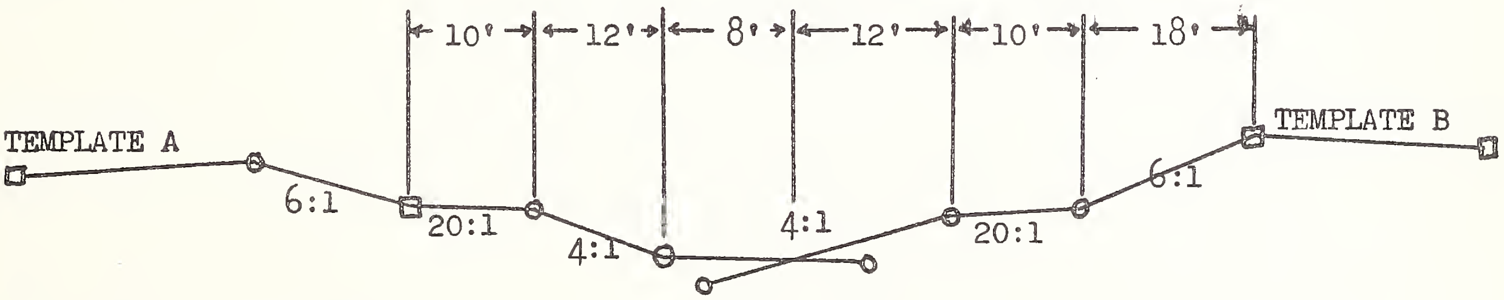
FLAT BOTTOM, VARIABLE SLOPE RIGHT


VARIABLE
24'
8'
VARIABLE
TEMPLATE A
TEMPLATE B
6:1

See Plate #2 Example #4

Since no segments are defined for the right, no intersection of segments will occur and a connecting slope will be applied to the shoulder of B template.

MEDIAN DITCH WITH BERMS


10'
12'
8'
12'
10'
18'
TEMPLATE A
TEMPLATE B
6:1
20:1
4:1
4:1
20:1
6:1

See Plate #2 Example #5

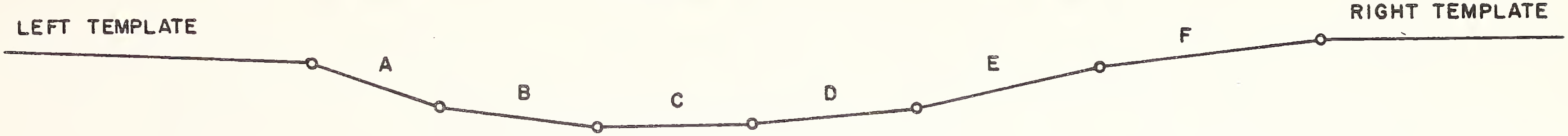
One slope to the berm must be included as a part of Template A (or Template B). The definition of the segments is standard. Note that the ditch width and +6 right slope to the ditch is greater than necessary to force an intersection.

Plate #2

STATE OF MONTANA
STATE HIGHWAY COMMISSION
MEDIAN DESIGN

DPS-E 26

PROJECT NO. ________ DESIGNER ________ DATA CHECKED BY ________ DATE ________



IDENT. NO.	
1 2 3 4 5	2 6
1 5	6 7

EXAMPLE NO.	*	BEG. OR END STATION	A HORIZ.	A ±VERT.	B HORIZ.	B ±VERT.	C HORIZ.	C ±VERT.	D HORIZ.	D ±VERT.	E HORIZ.	E ±VERT.	F HORIZ.	F ±VERT.	SKIP	LEFT	RIGHT
	8	16	17	21	25	29	33	37	41	45	49	53	57	61	65	66	67
1		650000	3000	-050									2000	-050		A	B
2	1	14635257	1800	-030	8000	1000							2400	-040		A	B
3		3460000														A	B
4		9620000	2400	-040	800	1000										A	B
5		800000	1000	-005	1200	-030	1000	1000	1600	-040	1000	-095	1800	-030		A	B

* EQUATION NUMBER (MAINLINE STATIONING)

SLOPES TABLE DATA DPS-E33 & E34

Tables of Fill Slopes and Cut Slopes are required for every earthwork quantities computer run. These tables contain cut and fill slope criteria to be used with all templates and only ONE (1) form is prepared per computer run although templates are to be developed for Lines A,B,C and D.

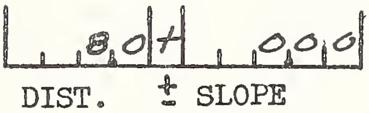
The slopes defined in the tables are stored in the computer and recalled by their corresponding letters (A through Z, excepting I and O) on the slope selection form. The maximum number of slopes stored in each table (Cut and Fill) is twenty-four (24).

All slopes in the tables are expressed as a ratio to one (1) and not as percentages, for example, a 6 to 1 slope would be entered 6.00 in the slope field. The slopes are further defined by use of algebraic signs. Minus (-) slopes are slopes extending downward while plus (+) slopes are slopes extending upward. ALWAYS SHOW ALGEBRAIC SIGNS IN PROPER COLUMNS WHEN CODING SLOPES TABLES. Vertical slopes will be coded 0.00 and horizontal slopes will be coded 999.99.

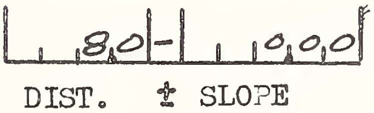
THE DISTANCE FIELDS REFER TO VERTICAL DISTANCE OF THE SLOPE UNLESS THE SLOPE IS HORIZONTAL (999.99). In the case of Horizontal slopes the distance field refers to Horizontal distance. TRUE HORIZONTAL SLOPES MAY BE OBTAINED.

EXAMPLES:

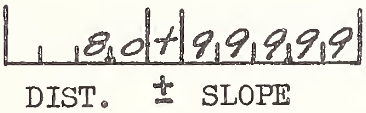
Vertical UPWARD slope for 8 feet is coded.


80
+
000
DIST.
±
SLOPE

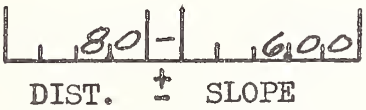
Vertical DOWNWARD slope for 8 feet is coded.


80
-
000
DIST.
±
SLOPE

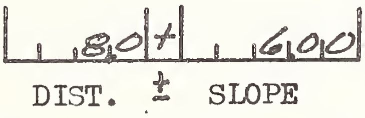
True Horizontal slope (8' bottom for ditch) is coded.


80
+
99999
DIST.
±
SLOPE

A DOWNWARD 6:1 slope for a vertical distance of 8 feet is coded.


80
-
600
DIST.
±
SLOPE

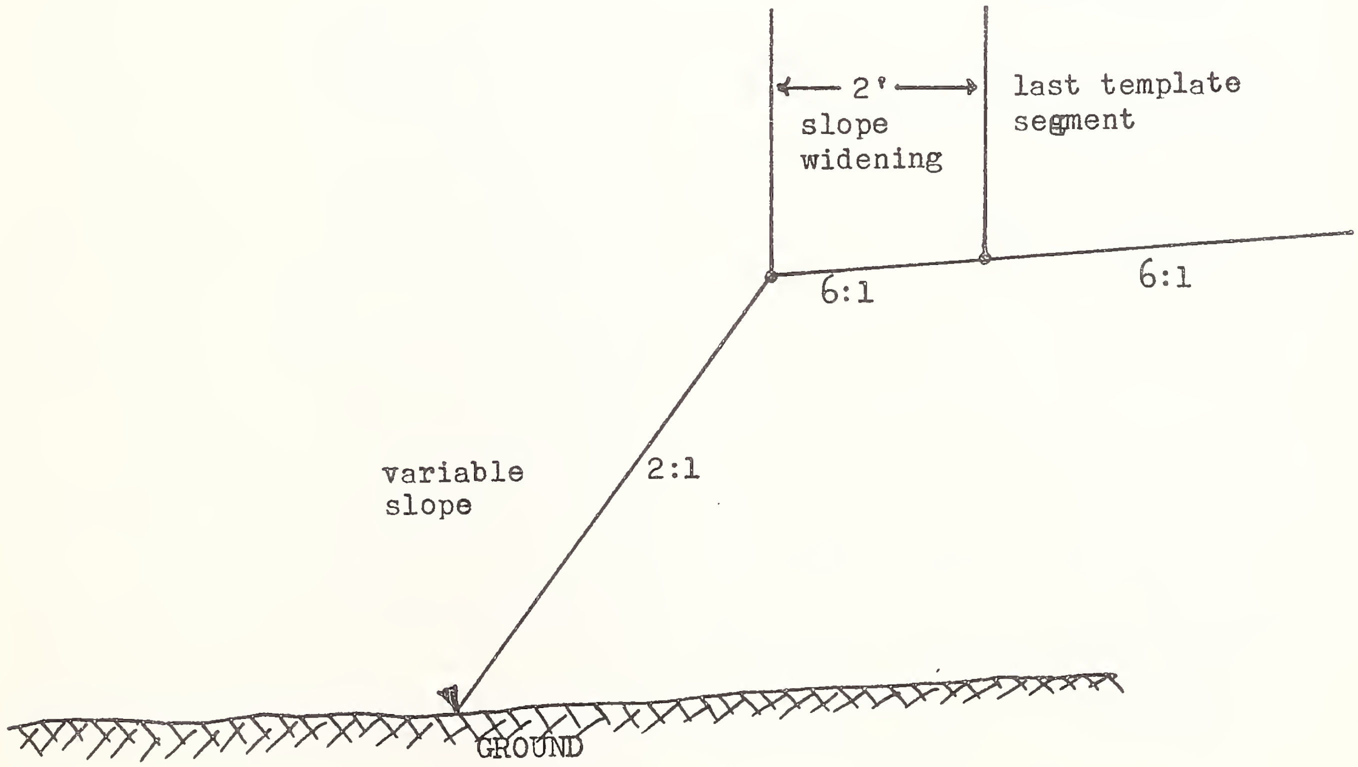
An UPWARD 6:1 slope for a vertical distande of 8 feet is coded.


80
+
600
DIST.
±
SLOPE

DISTANCE FIELD MUST BE NON-ZERO FOR VALID SLOPE.

Slope widening may be applied to fill slopes. This allows the designer to add extra shoulder width for such things as guardrail, without changing the template segments. The widening is applied to the last segment of the template for a specified horizontal distance at the slope of the last template segment. The catch is then computed from the end point of widening using the variable slope.

EXAMPLE:


2'
slope widening
last template segment
6:1
6:1
variable slope
2:1
GROUND

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DPS-E 33

PROJECT NO. ______ DESIGNER ______ DATA CHECKED BY ______ DATE ______

IDENT. NO.	
12345	33
1 … 5	6 7

TABLE OF FILL SLOPES

	W/D/E	DIST.	+ OR −	SLOPE		W/D/E	DIST.	+ OR −	SLOPE		W/D/E	DIST.	+ OR −	SLOPE		W/D/E	DIST.	+ OR −	SLOPE		W/D/E	DIST.	+ OR −	SLOPE		W/D/E	DIST.	+ OR −	SLOPE
8	9	11	15	20		21	23	27	32		33	35	39	44		45	47	51	56		57	59	63	68		69	71	75	80
A		100	-	1600	B		150	-	400	C		9999	-	300	D		200	-	2500	E		9999	-	00000	F		9999	-	99999
G		120	-	99999	H		80	-	600	J		40	-	600	K		20	-	600	L		10		600	M		08	-	600
N		04	-	600	P		02	-	600	Q		01	-	600	R		999	-	400	S		80	-	400	T		40	-	400
U		20	-	400	V		10	-	400	W		8	-	400	X		4	-	400	Y		2		400	Z		1	-	400

IDENT. NO.	
	34
1 … 5	6 7

TABLE OF CUT SLOPES

	DIST.	+ OR −	SLOPE		DIST.	+ OR −	SLOPE		DIST.	+ OR −	SLOPE		DIST.	+ OR −	SLOPE		DIST.	+ OR −	SLOPE		DIST.	+ OR −	SLOPE
8	11	15	20		23	27	32		35	39	44		47	51	56		59	63	68		71	75	80
A	30	-	600	B	100		99999	C	9999		400	D	40	-	2500	E	250		050	F	010	-	1500
G	80	-	300	H	40		300	J	20	-	300	K	40		300	L	8		300	M	4		300
N	2		300	P	1		300	Q	50		600	R	100		400	S	150		300	T			
U				V				W				X				Y				Z			

SLOPE SELECTION DATA DPS-E35

Slope selection cards govern the slope patterns to be applied to partial templates (Roadway Sections) to develop a complete template from catchpoint to catchpoint.

Slopes as used in the earthwork program are of two types, FIXED and VARIABLE, and a true understanding of these terms is necessary to fully utilize the capabilities of the "UNMES" System.

FIXED SLOPES - Slopes that will be applied exactly as defined in the Slopes Table. (Reference DPS-E33 Code Sheet).

VARIABLE SLOPES - Slopes that will automatically cut-off at intersection with terrain or default to a vertical slope from the hinge.

Fixed slopes may be overriden and converted to variable slopes in some cases through introduction of OPTIONS.

OPTIONS - Used to Define Governing Intercepts

I = Used only with fixed slopes. The catch point is defined as the initial intercept with the terrain.

C = Used with either fixed or variable slopes. If used on fixed slope only, the catch point is defined as the last intercept with terrain (If the slope intercepts terrain only at one point, the function will be the same as the "I" option.) If used with variable slopes it tests the location of the hinge point. If the hinge point is in fill, it defines the catch point the same as "C" option on fixed slopes. If the hinge point is in cut the catch point is defined as a normal variable slope selection.

B = Benching - Allows the designer to bench with slope selection. Benching is applied to variable slopes. An option code of "B" is associated with the first one to signal automatic benching. The slopes in the benching pattern will be repeated as many times as necessary until a catch is made, or it is apparent that no catch can be made; if no catch was made, a slope is warped from the last point in the bench to the last reading of ground, extrapolated 500 feet. For this reason the designer should use

discretion in calling automatic benching. Note that the maximum does not apply to benching.

R = Repeat may be used to designate the last slope in the bench, but it is optiona.

BENCHING TOLERANCE - Sets a tolerable limit to the benching pattern. If a vertical section comes within the tolerable limit of the catch, it will be extended to define a catch. This eliminates the repeating of another bench.

HINGE POINT - Sets the number of fixed slopes to be processed before any variable slopes are tried. For example, the designer wants a 6:1 for 3 feet, a flat bottom ditch for 10 feet, and a variable slope to catch the ground in cut sections, he would set his hinge point at 2. The program first checks to see if the hinge point is in cut or fill. In our case let's say it ends in cut. Then it would put in the 2 fixed slopes. It would then check to see if any of the options were in effect. If none were or there was no intersection with the groundline, it would begin testing the variable slopes, in our case starting with the third slope listed, one at a time until a catch is made. However, if no solution is found, it defaults to the hinge point and a vertical intersect is made.

EXCEPTION (E) - Slope selection entries with this notation override normal slope patterns in a specific area as defined by the beginning and ending stations.

Separate slope selection cards will be prepared separately for each template (A,B,C, or D). THE EXCEPTION TO THIS RULE IS WHEN MEDIAN DESIGN FORMS ARE CODED. Since "A" and "B" templates are joined into "A" only in such cases, slope selection coding is necessary only for "A" template.

Slope selection entries may further define slope patterns to be used by coding the side of the template on which to apply the pattern. Separate slope patterns may be specified for either side of the roadway at a particular station or they may be identical. This is accomplished by entering on the coding form an "R" for the RIGHT side, and "L" for the LEFT side, or a "B" for BOTH sides.

Control of distances to catch points is occasionally desirable. MINIMUM distance or MAXIMUM distance with reference to the template centerline may be specified. If a catch is desired at a specific distance, such can be accomplished by coding both the maximum and minimum distances at the specific distance.

Both FIXED and VARIABLE slopes may be utilized for a slope pattern. The maximum number of slopes in any one pattern is seventeen (17), ONE OF WHICH MUST BE VARIABLE.

The slope pattern must be defined in consecutive fields on the form beginning in columns 47 & 48 (No interspersed blank fields allowed) using the reference letters that appear in the cut and fill slopes tables. The order of fixed slopes must be from the shoulder point out for either the right or left side. The order listed for variable slopes determines the sequence in which the slopes are tested for interception with the ground.

In the event the defined slope pattern cannot make an intercept with the terrain section because such an intercept occurs beyond the limits of the terrain section a specific remedial action is taken. THE TERRAIN SECTION IS EXTENDED FOR A DISTANCE OF 500 FEET ON EACH SIDE WITH SLOPES EQUAL TO THE OUTERMOST SLOPES OF THE TERRAIN SECTION. The needed extension is then listed in output reports. If no catch can be obtained even after extension of the terrain a vertical slope will be applied at the outermost limit of the last defined fixed slope with an error condition listed on printer output.

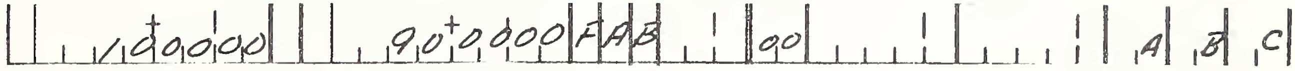
The slopes program processes each template separately. It begins with template "A", applying slopes to complete the entire developed design template, then incorporates this "As Built" template into the original

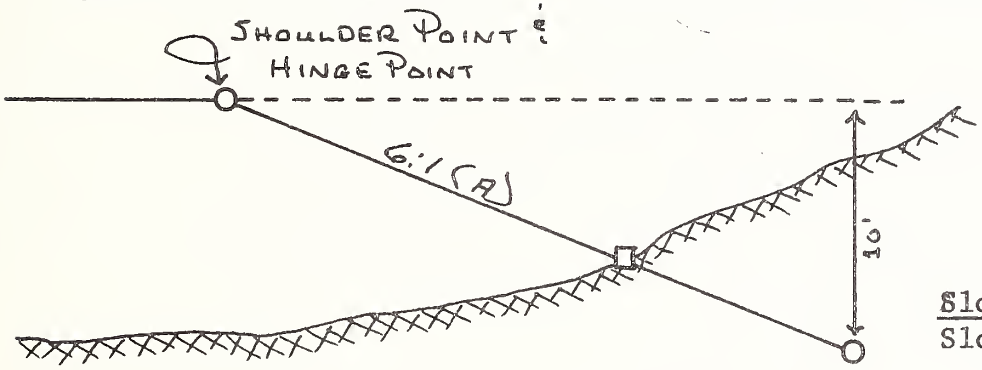
terrain, slopes for template "B" are then applied which will complete the development of design template "B" (the slopes thus applied may in effect intercept template "A"). This process is continued with template "C" and "D" with each fully developed template being incorporated into the "Original Terrain" producing "As Built Terrain" for usage by subsequent template development.

Following are examples to further illustrate coding procedures used with the Slopes Program.

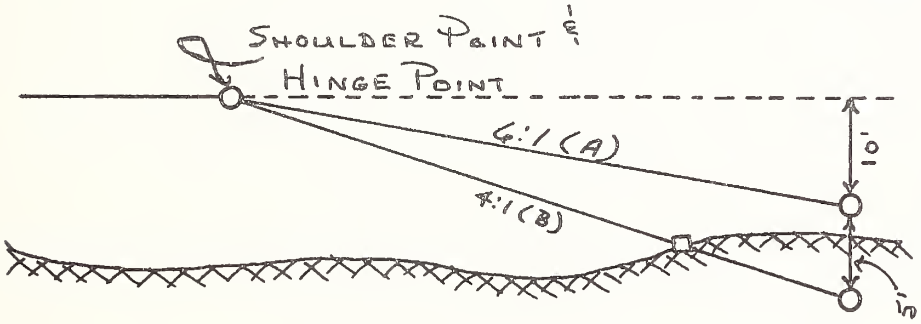
EXAMPLE 1:

No FIXED slopes are called for. Slope A will be tried first, then Slope B, then Slope C until intercept occurs. If intercept occurs with any slope, point of intersection is computed and rest of slopes are ignored.

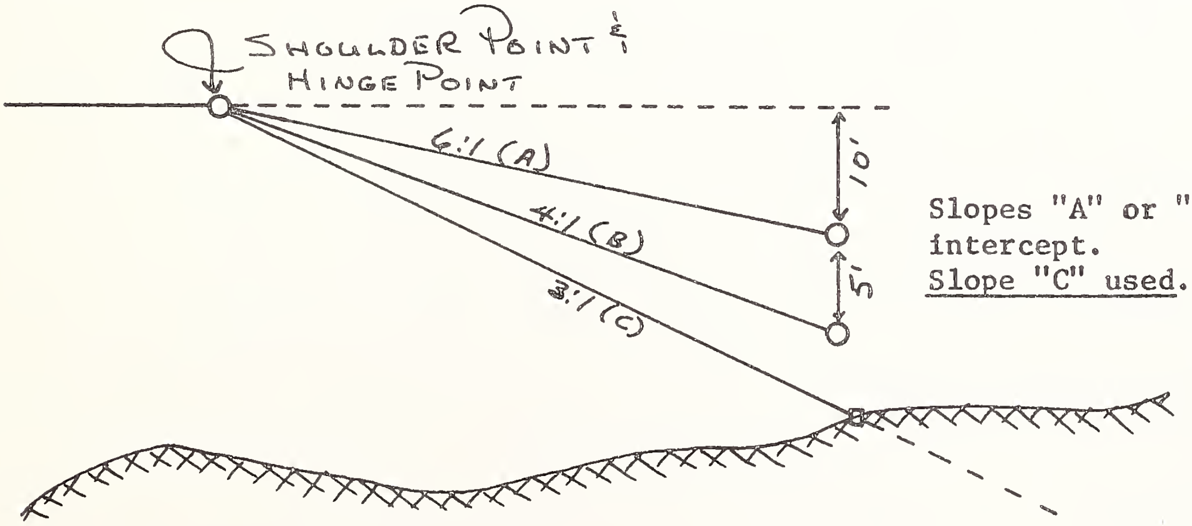

1 0 0 0 0 0
9 0 0 0 0 0 0
F A B
0 0
A
B
C


SHOULDER POINT &
HINGE POINT
6:1 (A)
10'

Slope "A" intercepts and used.
Slopes "B" and "C" ignored.


SHOULDER POINT &
HINGE POINT
6:1 (A)
4:1 (B)
10'
5'

Slope "A" will not intercept.
Slope "B" used.
Slope "C" ignored.


SHOULDER POINT &
HINGE POINT
6:1 (A)
4:1 (B)
3:1 (C)
10'
5'

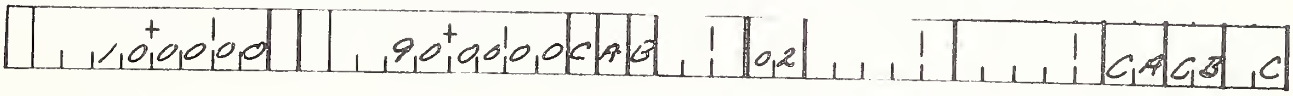
Slopes "A" or "B" will not intercept.
Slope "C" used.

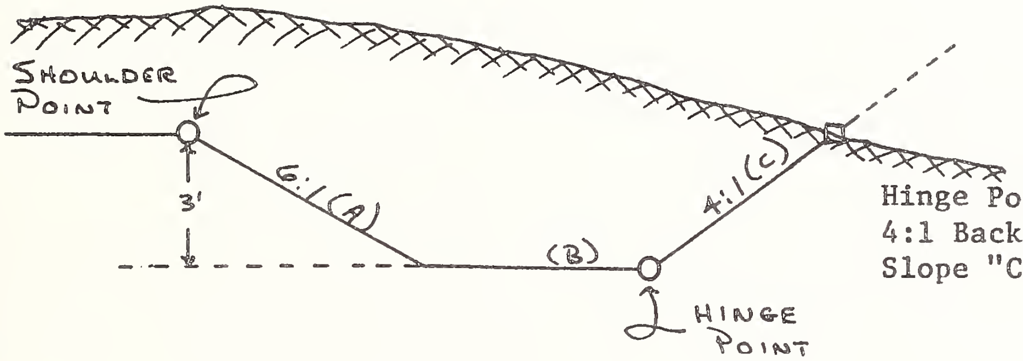
This example is the usual coding for selection of FILL slopes based on a typical section calling for 6:1 slopes between 0' - 10' of fill, 4:1 slopes between 10' - 15' of fill, and 3:1 slopes on fills exceeding 15'.

Slopes "A", "B", and "C" in this example are all VARIABLE slopes and will be used on all FILL sections unless overriden by EXCEPTIONS (E in column 17).

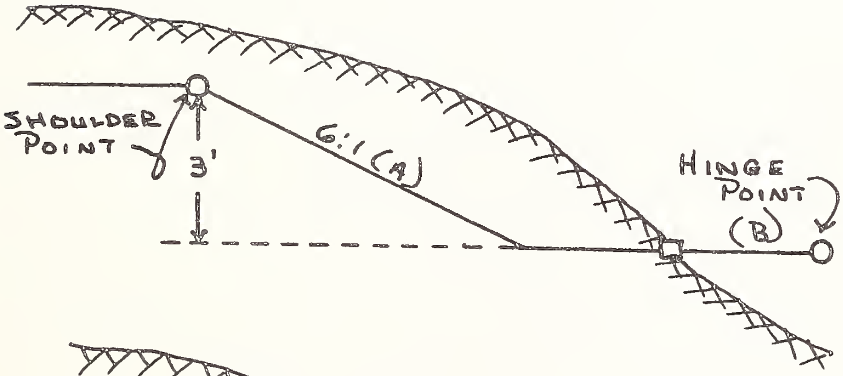
EXAMPLE 2:

Two FIXED slopes (A & B) are called for and these slopes will be applied and a test made to determine if "C" slope is necessary. If the hinge point (Last point of last FIXED slopes) is in FILL, the CATCH OPTIONS will be utilized in determining the catch point on the Terrain Line.

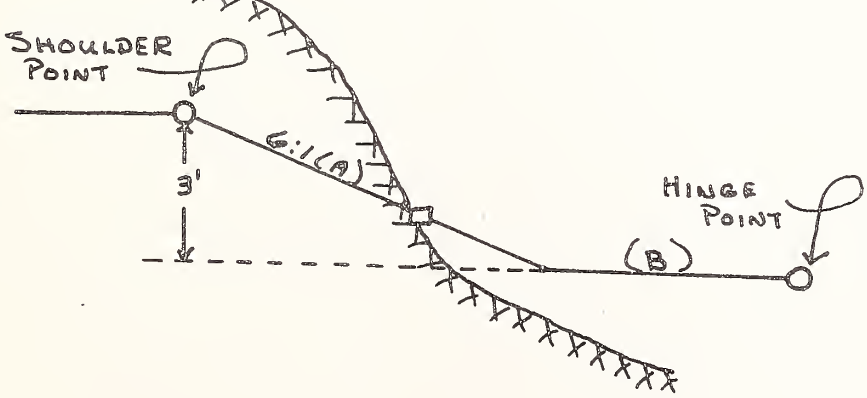

1+00.000
90+00.00
C
A
B
02
C A
C B
C


SHOULDER POINT
3'
6:1 (A)
(B)
4:1 (C)
HINGE POINT

Hinge Point was in Cut so 4:1 Backslope (Variable Slope "C") was applied.


SHOULDER POINT
3'
6:1 (A)
HINGE POINT
(B)

Hinge Point in Fill so catch option of slope "B" used to obtain catch in ditch bottom


SHOULDER POINT
3'
6:1 (A)
HINGE POINT
(B)

Hinge Point in Fill so catch options of slopes "B" and "A" used to obtain catch in Foreslope "A".

If no SLOPE OPTIONS were coded the results would be the same as

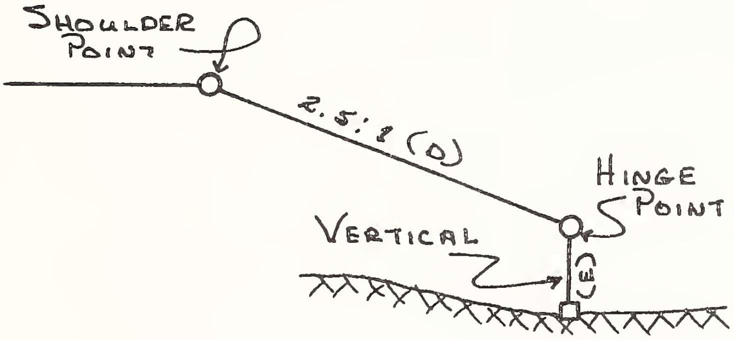
CATCH (C) option would used automatically, however, it is well to code the option as it might be desirable on specific occasions to use the INTERCEPT (I) option and an understanding of options is highly beneficial in other coding operations.

The example slope pattern will be used in all CUT slope patterns unless overriden by EXCEPTION (E in column 17) patterns.

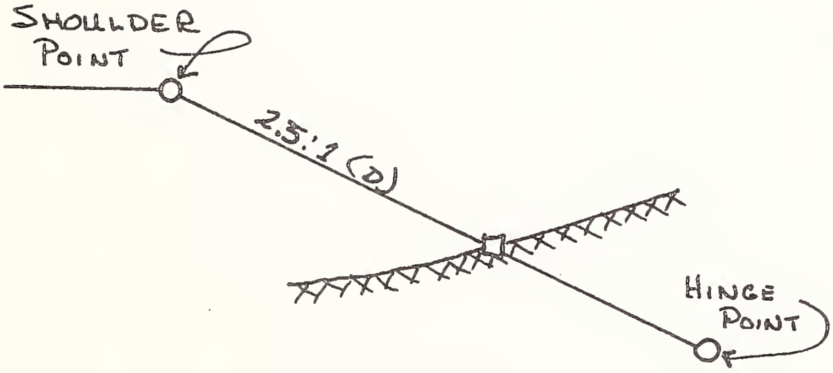
EXAMPLE 3:

This is an example of a FILL slope pattern with one FIXED slope such as might be coded if a retaining wall is contemplated.

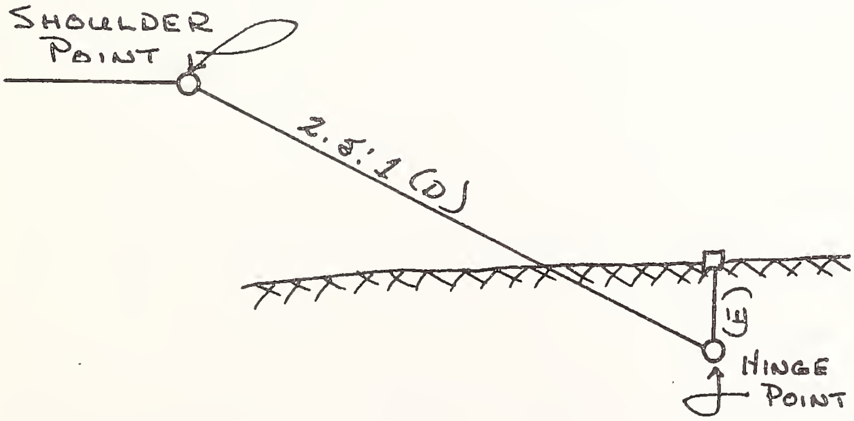
	1120000	E		209000	F	A	B		01			CD	E


SHOULDER POINT
2.5:1 (D)
HINGE POINT
VERTICAL
(E)

Hinge Point is in a Fill Condition after FIXED slope "D", therefore vertical downward slope (E) is applied.


SHOULDER POINT
2.5:1 (D)
HINGE POINT

Hinge Point is in Cut Condition. If CATCH OPTION (C) is coded intercept of FIXED slope will be computed and Slope "E" will be ignored.

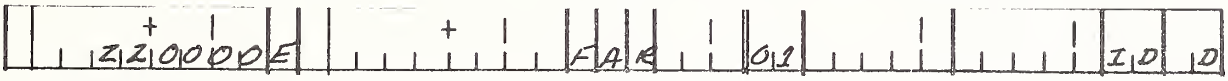

SHOULDER POINT
2.5:1 (D)
(E)
HINGE POINT

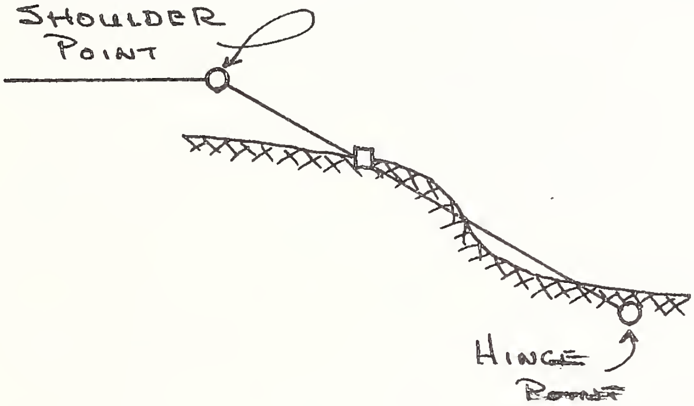
Hinge Point is in Cut Condition. If CATCH OPTION (C) is not coded the FIXED slope intercept is ignored and a vertical tie is made to the Terrain. Error will be noted in Output Listing.

OPTION Coding is necessary on FIXED FILL slopes to insure correct results.

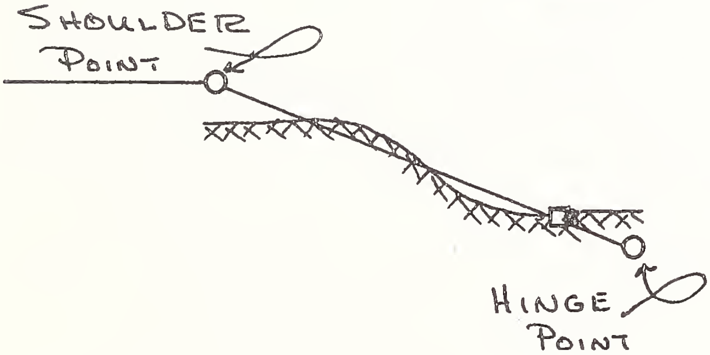
EXAMPLE 4:

This example is for a FILL slope pattern to be used on the RIGHT side only at only station 22+00.00. The CATCH (C) option code is used to obtain a catch point at the last intercept with the Terrain Line.

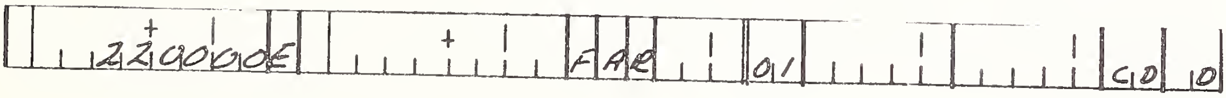

+
220000E
+
FAR
01
ID
D


SHOULDER POINT
HINGE POINT

"I" OPTION computers catch point at initial intercept with Terrain Line.


SHOULDER POINT
HINGE POINT

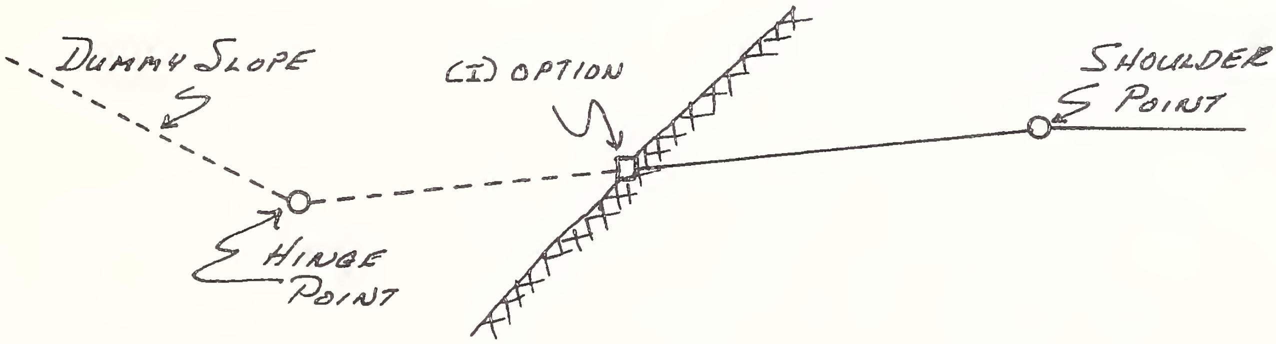
"C" OPTION compute the catch point at last intercept with Terrain Line.


+
220000E
+
FAR
01
CD
D

"I" and "C" OPTIONS function in the same way with either CUT or FILL slopes and are applied to FIXED slopes only, therefore, in the example an additional dummy VARIABLE slope was coded to comply with the rule that all slope patterns must end with at least one (1) VARIABLE Slope. The "I" OPTION function is automatic if only VARIABLE slopes are coded for FILL conditions.

Example 5:

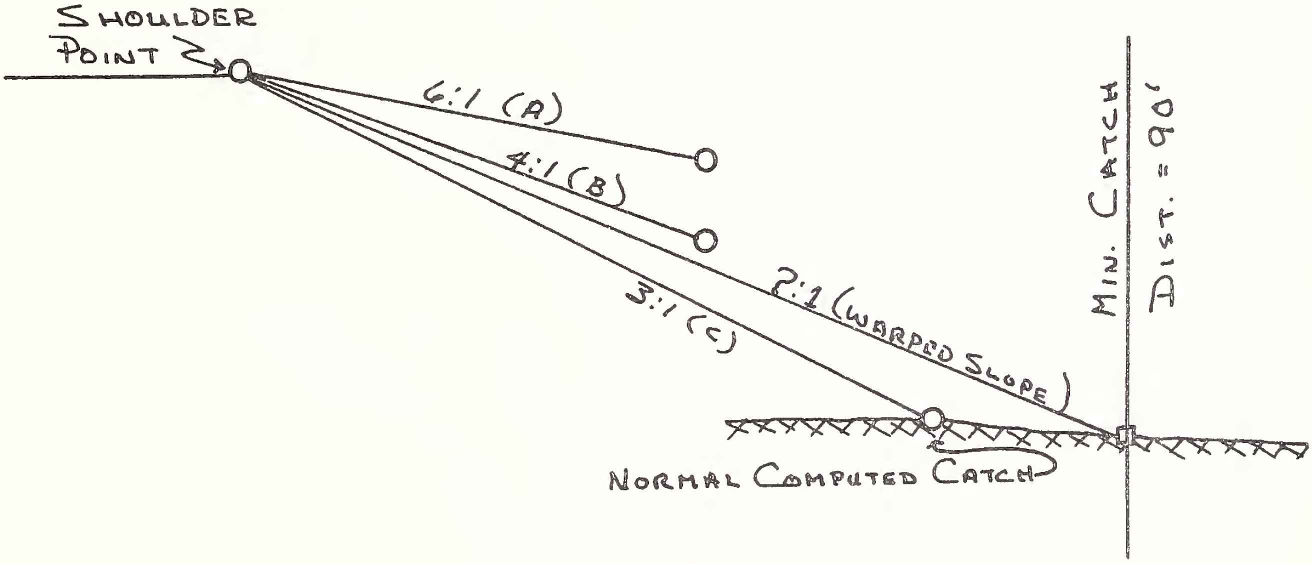
Certain special conditions may exist where by a downward slope may be desired in a CUT section (i.e., a day light section). Since all VARIABLE CUT slope selections automatically are in an upward direction a FIXED slope with an (I) INTERCEPT may be used. A downward FIXED slope would be then given a distance long enough to place the hinge point beyond a possible cut catch and a dummy variable slope would follow.



	270000		300000	C	A	L		01			I D	B

EXAMPLE 6:

If a minimum catch point distance is desired such may be controlled by an entry in columns 37-41 on the Slope Selection Form as per the example.

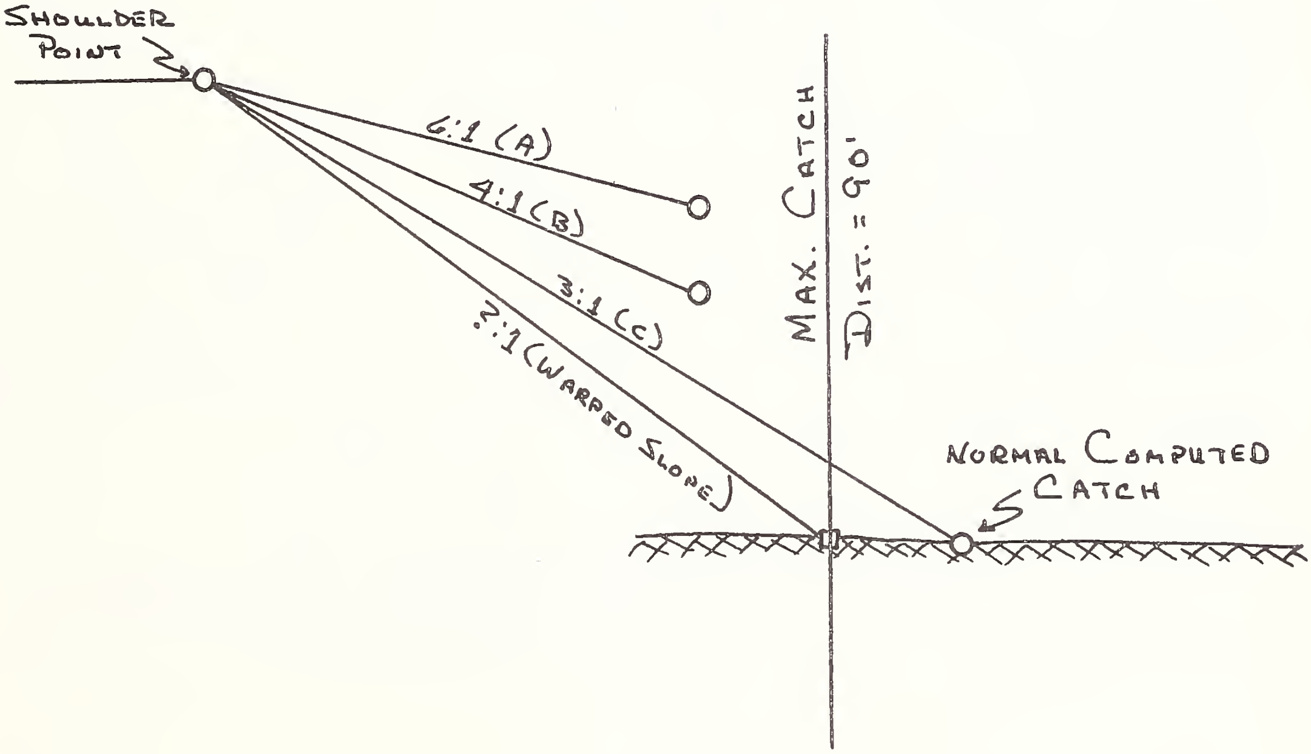

SHOULDER POINT
6:1 (A)
4:1 (B)
3:1 (C)
?:1 (WARPED SLOPE)
MIN. CATCH DIST. = 90'
NORMAL COMPUTED CATCH

The VARIABLE Slope "C" catches inside minimum catch distance, therefore, it is ignored. A WARPED slope is computed and a catch point set at the minimum catch distance.

	499000		500000	F	A	B		90	900		A	B	C

EXAMPLE 7:

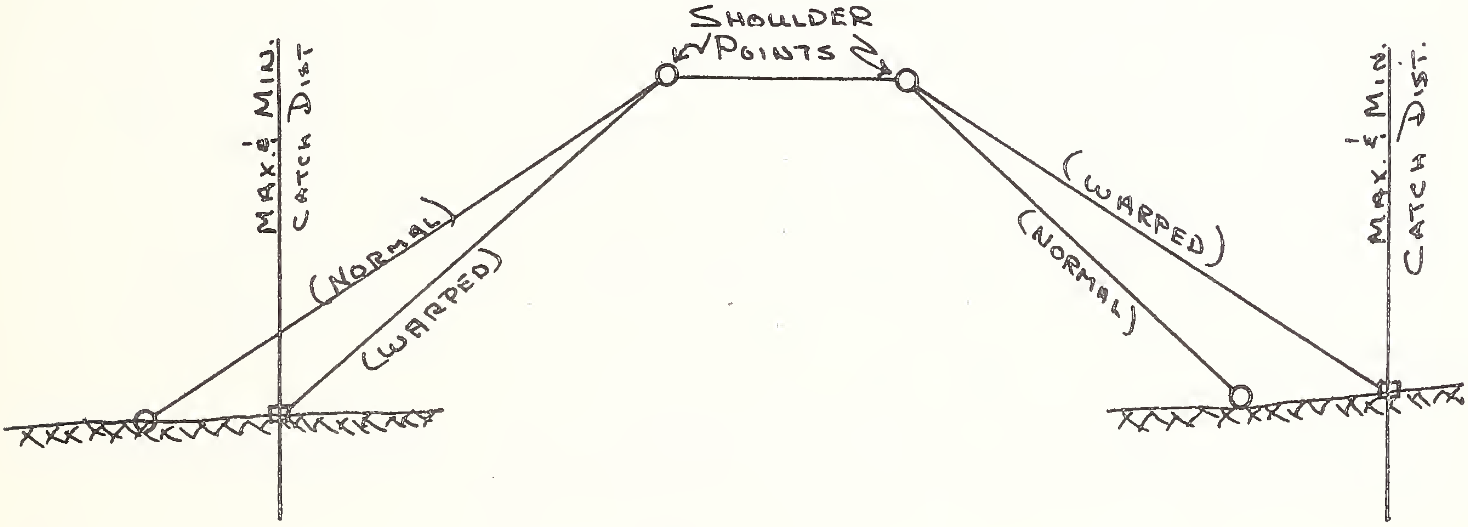
If a maximum catch point distance is desired, such may be controlled by an entry in Columns 42-46 of the Slope Selection Form as per the example. Such a condition might occur when roadway design must be limited to existing R/W.


SHOULDER POINT
6:1 (A)
4:1 (B)
3:1 (C)
2:1 (WARPED SLOPE)
MAX. CATCH
DIST. = 90'
NORMAL COMPUTED CATCH

	52+9000		59+90000	F	A	B		00		900	A	B	C
	+		+										

EXAMPLE 8:

It is sometimes desirable, particularly on Urban Projects, to set a fixed catch distance (possibly a R/W line) and warp all slopes. This can be accomplished by making identical entries in Columns 37-41 and 42-46 as per the example.

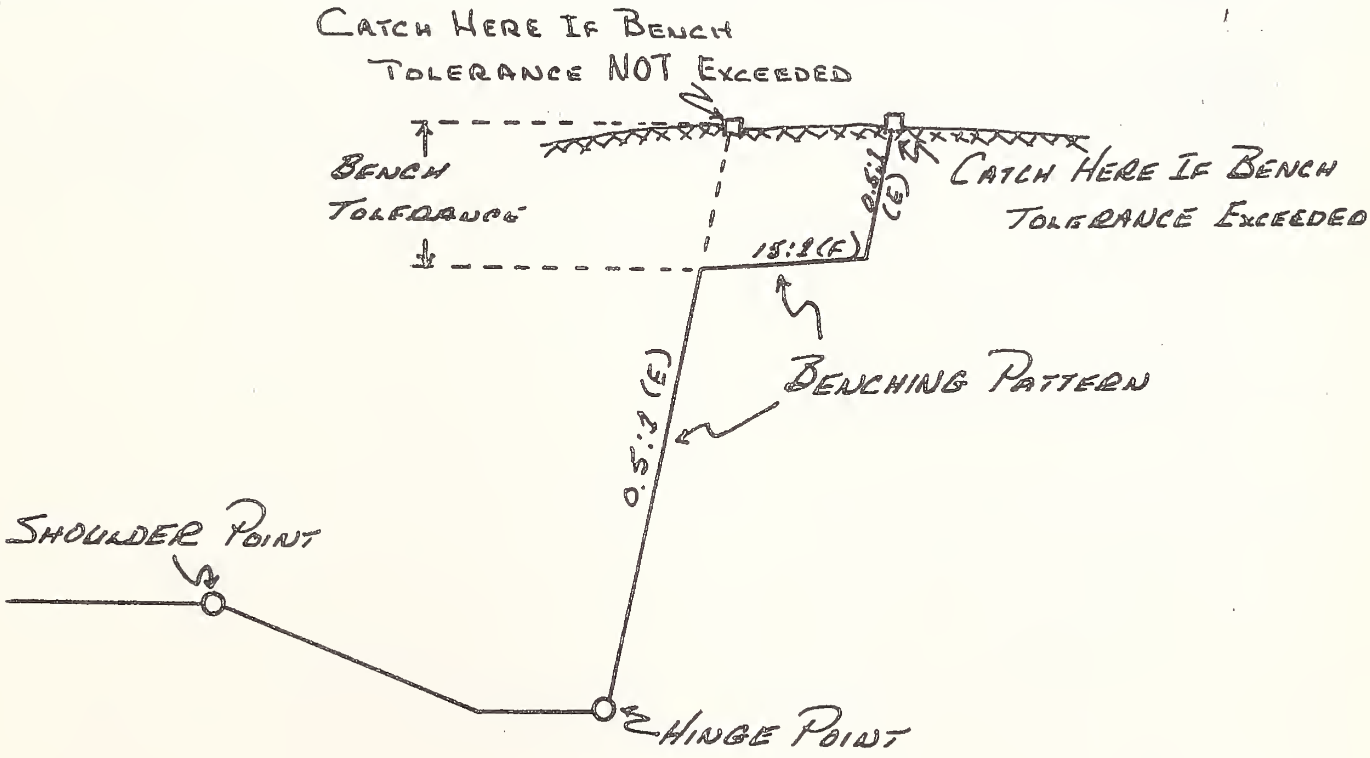

SHOULDER POINTS
MAX. & MIN. CATCH DIST.
(NORMAL)
(WARPED)
(WARPED)
(NORMAL)
MAX. & MIN. CATCH DIST.

	600000		800000	F	A	B		00	900	900	C

EXAMPLE 9:

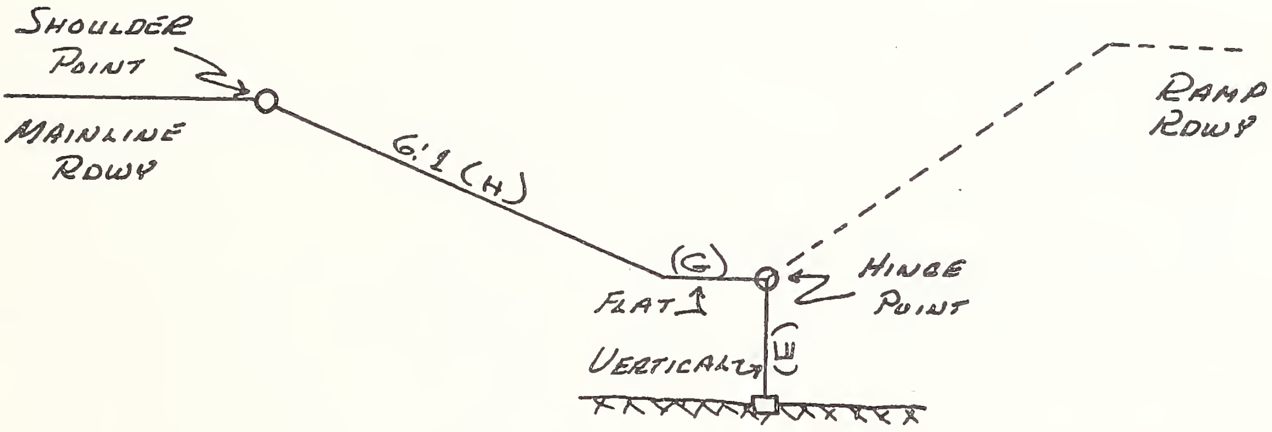
Benching is sometimes desirable and can be easily coded as per the example. The two FIXED cut slopes (A & B) are listed, followed by the benching pattern. The "Bench" is made up of the two VARIABLE cut slopes (E & F) and such is denoted to the computer by the BENCH (B) OPTION coded on the First slope of the bench. The benching pattern will automatically continue until a catch is made with the Terrain Line; however, if the first slope of the bench reaches an elevation where the Terrain Line is less than the "Bench Tolerance" as indicated in Columns 30-32 of the Slope Selection Form, then the first slope is continued to an intercept with the Terrain Line.

81 00000 83 00000 C A B 80 02 A B B E F


CATCH HERE IF BENCH TOLERANCE NOT EXCEEDED
BENCH TOLERANCE
CATCH HERE IF BENCH TOLERANCE EXCEEDED
0.5:1 (E)
1.5:1 (F)
BENCHING PATTERN
0.5:1 (E)
SHOULDER POINT
HINGE POINT

EXAMPLE 10:

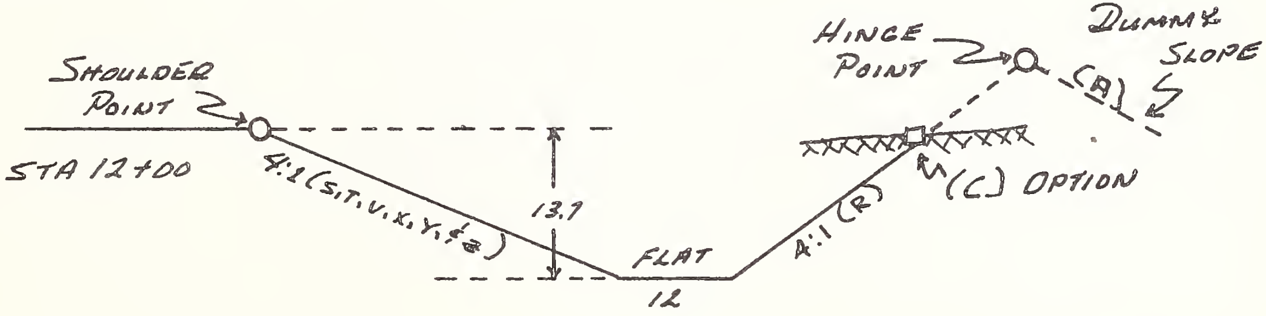
After a roadway design has been finalized, special sections may be coded for obtaining divisions in earthwork quantities between the main line and ramps, frontage roads, etc. This type of coding should not be attempted until preliminary cross sections have been plotted and design finalized.

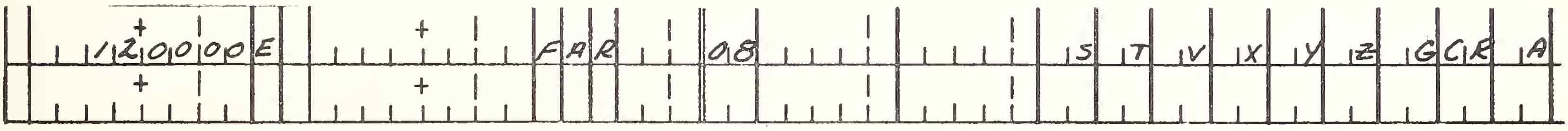

SHOULDER POINT
MAINLINE RDWY
6:1 (H)
(G)
FLAT
HINGE POINT
VERTICAL
(E)
RAMP RDWY

	8400000		8600000	F	A	B		02			H	G	E

EXAMPLES 11 & 12:

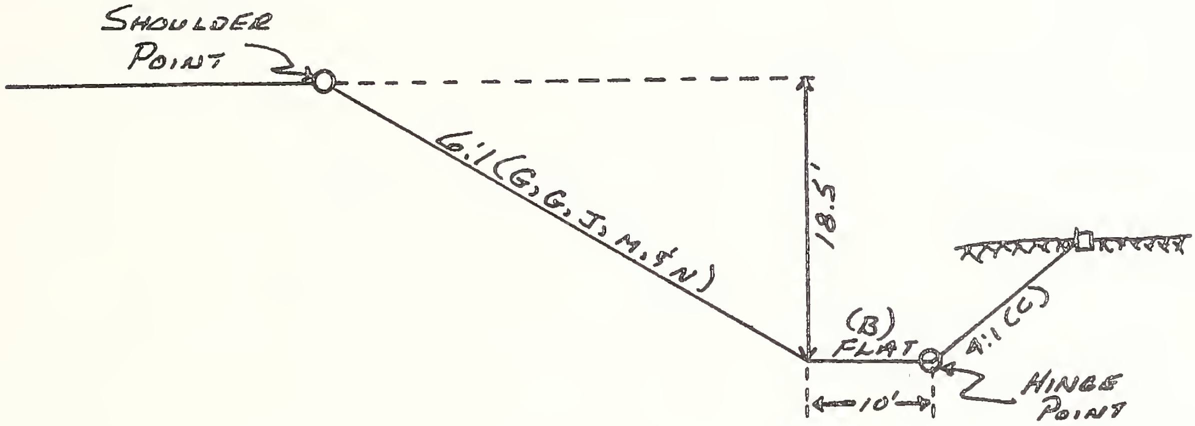
Special ditches may be coded into earthwork design runs, but such does require considerable coding as SLOPES DEFINED ON THE SLOPE SELECTION FORM DO NOT TRANSITION. Each slope change must be coded separately, and it is usually easier to utilize the TEMPLATE FORM for coding such ditch conditions; however, circumstances may necessitate the usage of the SLOPE SELECTION FORM. In such cases the SLOPE TABLES must contain adequate slope definitions to accomplish the desired results. Any depth can be coded by using a combination of the following: (8, 4, 2, 1, .8, .4, .2, and .1). Due to the limited number of available entries in the SLOPES TABLES (24 in each) it may be advisable to enter slope definitions for special ditching in both and code the SLOPE SELECTION FORM accordingly. In the example coding, it may be noted that 6:1 and 4:1 entries were made in the FILL TABLE while the 3:1 entries were placed in the CUT TABLE. (Fill H to Z and Cut G to P).




1120000 E FAR 08 S T V X Y Z G C R A

The combination of slope depths S,T,V,X,Y,& Z totals 13.7 feet for coding of foreslope, slope "G" defines 12' flat bottom ditch, and slope "R" defines the backslope. Note that the CATCH (C) OPTION was used with slope "R" and dummy slope "A" was used to comply with rule. There must be at least one VARIABLE slope in each slope pattern.

Example 12 is a sample coding of a special ditch in fill condition with reference to the following illustration:

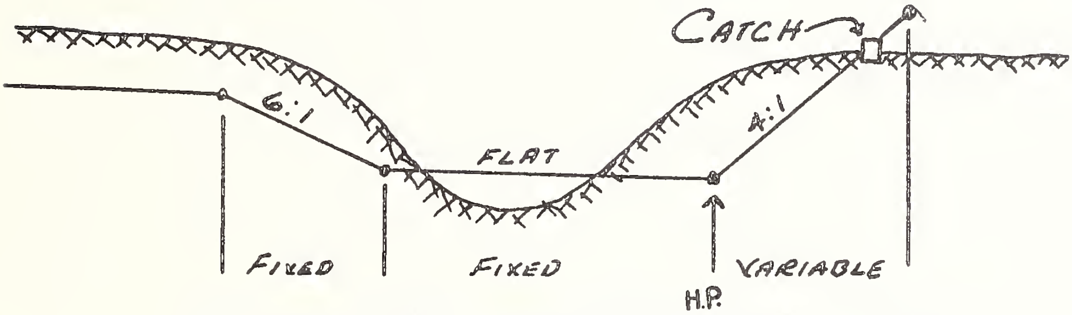


The slope combination (G,G,J,M,& N) gives a total depth of 18.5 feet. NOTE: Repetitive coding of a particular slope is acceptable in any slope pattern. Slope "B" defines the flat bottom ditch, and slope "C" is a VARIABLE slope.

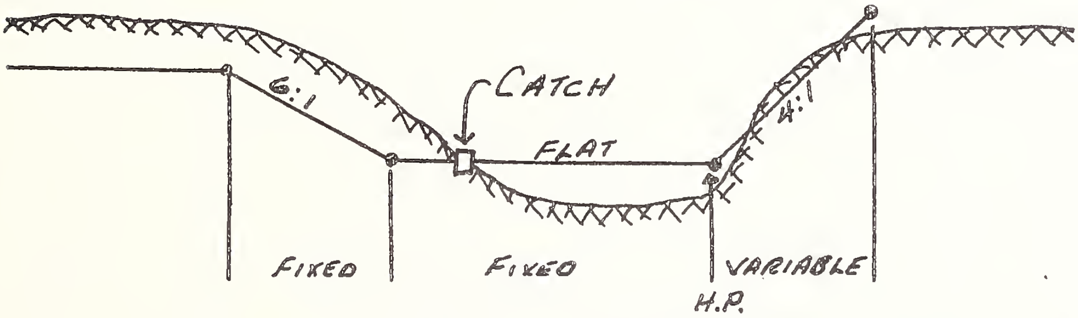
*	BEG. STATION	EXCEPT	*	END STATION	C or F	TEMP.	R/L or B	BENCH TOLER.	HINGE POINT	MINIMUM DISTANCE FROM ℄	MAXIMUM DISTANCE FROM ℄	O S	O S	O S	O S	O S	O S	O S
8	9 16	17	18	19 26	27	28	29	30 32	35	37 41	42 46	47	49	51	53	55	57	59
	1300.00	E		.	C	A	R	.	06	.	.	G	G	J	M	N	B	C

EXAMPLE 13:

Illustrates the use of the "C" option on variable slopes selection.


CATCH
6:1
FLAT
4:1
FIXED
FIXED
VARIABLE
H.P.

The 4:1 catches as the hinge point is in cut.


6:1
CATCH
FLAT
4:1
FIXED
FIXED
VARIABLE
H.P.

The flat ditch intersects as the hinge point is in fill.

Note is is necessary only to place the "C" on the first variable and it is automatically applied to the rest.

*	BEG. STATION	EXCEPT	*	END STATION	C or F	TEMP.	R L or B	BENCH TOLER.	HINGE POINT	MINIMUM DISTANCE FROM ℄	MAXIMUM DISTANCE FROM ℄	O S	O S	O S	O S	O S	O S
8	9 16	17	18	19 26	27	28	29	30 32	35	37 41	42 46	47	49	51	53	55	57
	24+90.00	E		+	C	A	R		02			CA	CB	CQ	R	S	C

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DPS-E35

SLOPE SECTIONS

IDENT. NO.	
	3 5
1 5	6 7

PROJECT NO. ______ DESIGNER ______ DATA CHECKED BY ______ DATE ______

EXAMPLE

NO.	*	BEG. STATION	EXCEPT	*	END STATION	C or F	TEMP.	R L or B	BENCH TOLER.	HINGE POINT	MINIMUM DISTANCE FROM ℄	MAXIMUM DISTANCE FROM ℄	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
	8	9–16	17	18	19–26	27	28	29	30–32	33	37–41	42–46	47		49		51		53		55		57		59		61		63		65		67		69		71		73		75		77		79	80
1		10+0000			90+0000	F	A	B		00				A		B		C																												
2		10+0000			90+0000	C	A	B		02			C	A	C	B		C																												
3		15+0000	E		20+0000	F	A	B		01			C	D		E																														
4		22+0000	E		+	F	A	R		02			C	D		D																														
5		27+0000	E		30+0000	C	A	L		01			I	D		B																														
6		40+0000	E		50+0000	F	A	B		00	900			A		B		C																												
7		52+0000	E		59+0000	F	A	B		00		900		A		B		C																												
8		60+0000	E		80+0000	F	A	B		00	900	900		C																																
9		81+0000	E		83+0000	C	A	B	80	02				A		B	B	E		F																										
10		84+0000	E		86+0000	F	A	B		02				H		G		E																												
11		12+0000	E		+	F	A	R		08				S		T		V		X		Y		Z		G	C	R		A																
12		13+0000	E		+	C	A	R		06				G		G		J		M		W		B		C																				
13		14+0000	E		+	C	A	R		02			C	A	C	B	C	Q		R		S		C																						
		+			+																																									
		+			+																																									
		+			+																																									

O- OPTION
S- SLOPE

* OVERLAPPING EQUATION NO.

COMPACTION FACTOR DATA DPS-E40

Compaction factors may be applied to any template to either cut or fill. The factor may be changed at any point in the project by entering the template station at the location of the change of factor and the new factor. Only one factor, either cut or fill, will be in effect per template; however, the values need not be the same for every template.

When a factor is given for fill (F in Col. 18) all fill volumes for this template are multiplied by this quantity and shown in the volumes listing under ADJUST VOL. If a factor is given for cut (C in Col. 18) all cut volumes for this template are multiplied by this quantity and shown under ADJUST VOL. Factors less than 1.0 may be used if, for example, standard specifications prescribe swell be applied to fill quantities.

The format for the compaction card is as follows:

Col.	1- 5	Tape identification number.
	6- 7	Card Type "40".
	8	The equation number on the template line.
	9-16	The template station at which the compaction factor is to begin. This will continue to end of project or until changed by another entry.
	17	The template for which the factor applies.
	18	Cut or fill code.
	19-24	The value of the factor.

The values are controlled by the following method:

All zeros denote standard comp. 0.00001 to .40000 denotes standard compaction plus any percent up to 40.

0.40001 to 9.99999 denotes a controlled compaction factor as specified by the designer.

FORCED BALANCE DATA DPS-E41

Computes a factor for the area between the balance points and balances the quantities.

The format of the balance card is as follows:

Col.	1- 5	IDENT Number.
	6- 7	Card Type "41".
	8	The Equation number on the template line.
	9-16	Template Stationing.
	17	Template Code.
	18	Fill or Cut. Factor will be applied to whichever is designated.

STATE OF MONTANA
STATE HIGHWAY COMMISSION

DPS-E 40

PROJECT NO. ____________ DESIGNER ____________ DATA CHECKED BY ____________ DATE ____________

COMPACTION FACTORS

IDENT. NO.	
12345	40
1 5	6 7

*	STATION	TEMP.	C or F	FACTOR	
8	9 16	17	18	19 24	
	20+00.00	A	F	0.00000	←STANDARD
	+				
	20+0000	A	F	010000	←STD + 10%
	+				(MAY BE UP TO 40%)
	+				
	30+0000	A	C	090000	FACTOR OF .90
	40+0000	A	C	999999	MAXIMUM FACTOR
	50+0000	A	C	041000	MINIMUM FACTOR
	+				
	+				
	+				
	+				
	+				
	+				
	+				
	+				

*OVERLAPPING EQUATION NO.

BALANCE POINTS

IDENT. NO.	
	41
1 5	6 7

*	STATION	C or F	TEMP
8	9 16	18	17
	10+00.00	F	A
	40+0000	F	A
	70+0000	F	A
	100+0000	F	A
	+		
	+		
	+		
	+		
	+		
	+		
	+		
	+		
	+		
	+		
	+		
	+		

ADDED QUANTITIES DATA DPS-E42

It may be necessary to adjust volumes at various stations during the computation of volumes to compensate for topsoil to be removed or added to the mass line, special ditches not shown on the cross sections, etc. This is done by filling out the added quantities form giving the template station at which the volume is to be applied, the template to which the volume is to be applied, and the volume in cut and/or fill to be added or subtracted, (entered as a minus value).

The format of the quantities card is as follows:

Col.	1- 5	Tape identification number.
	6- 7	Card Type "42".
	8	The equation number on the template line.
	9-16	The template file to which volumes are to be applied.
	25-32	The plus or minus value of the amount the cut volume is changed.
	33-40	The plus or minus value of the amount the fill volume is changed.
	41-80	Remarks will be printed out on the edit for identification.

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DPS-E 42

ADDED QUANTITIES

IDENT. NO.	
1 5	6 7
	42

PROJECT NO. ______ DESIGNER ______ DATA CHECKED BY ______ DATE ______

*	STATION	TEMP.	CUT	FILL	REMARKS
8	9 16	17	25 32	33 40	41 80
	10+00.00	A	1402		BGN PROJ TRANSITION
	15+00.00		647	41	COUNTY ROAD LT
	25+00.00		115		DRAIN DITCH LT
	25+00.01			15	DITCH BLOCK LT
	60+00.00	A		1555	END PROJ TRANSITION
	+				
	+				
	+				
	+				
	+				
	+				
	+				
	+				
	+				
	+				
	+				

* OVERLAPPING EQUATION NO.

QUANTITIES DATA DPS-E45

This control card must be read in to specify a beginning and an ending station where volumes are to be calculated. This card should give the beginning quantities for each template (if not zero). Templates which are not to be included may be suppressed at this time.

If there is more than one control card, all but the last must have "C" in column 80 to indicate continuation. To use continuation control cards without a gap in the quantities for a particular template, the ending station of the previous control card and the beginning station of a new card must be identical and must match an existing terrain station for that template. However, for 30 station totals as such breaks, when an add mass card falls on a station used for a break the stations must differ by .01 feet or else the added quantity will show in both breaks.

The format for the Quantities is as follows:

Col.	1- 9	Beginning Station, includes overlapping equations number if applicable.
	10-18	Ending Stations, includes overlapping equation number if applicable.
	19	Zero will print template A, 1 will suppress it.
	20	Zero will print template B, 1 will suppress it.
	21	Zero will print template C, 1 will suppress it.
	22	Zero will print template D, 1 will suppress it.
	23	Zero will print areas, 1 will suppress it.
	24-79	Template cut and fill quantities if you wish to start with some quantity other than zero.

DPS-E 45

STATE OF MONTANA
STATE HIGHWAY COMMISSION
EARTHWORK QUANTITIES

IDENT. NO	
12345	45

1 5 6 7

PROJECT NO. ____________ DESIGNER ____________ DATA CHECKED BY ____________ DATE ____________

BEG. STATION * 1–9	END STATION * 10–18	A 19	B 20	C 21	D 22	23	A LANE CUT 24–30	A LANE FILL 31–37	B LANE CUT 38–44	B LANE FILL 45–51	C LANE CUT 52–58	C LANE FILL 59–65	D LANE CUT 66–72	D LANE FILL 73–79	C 80
44600.00	2 0068 19.65	0	0	1	1	0									
+	+														
+	+														
+	+														
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*EQUATION NUMBER (MAINLINE STATIONING)

DESIGN DATA EDIT ERROR LISTING

Input data is first sorted and put into proper sequence by template, and type, and stationing. Listing by the edit phase is in this order, not the order in which the data has been listed on the input sheets. In addition to listing the data as read, diagnostics are included for any data which is illogical or will cause errors in the computation of earthwork quantities. If the run has been aborted, the message "**CORRECT ERRORS BEFORE RUNNING THE EARTHWORK**" will be printed. In some instances when the error is obvious, the machine operator will make the correction and rerun the job.

Error messages include:

"NO IDENTIFICATION CARD FOR JOB" or "NO RESET CARD IS PRESENT". A common cause of this message is the omission of a template code in a data card.

Equations:

"EQ NUMBER ON AHEAD STA OF EQUATION BELOW MUST BE INCREASED" - Equation is an overlap and no overlap number given.

"STATION FALLS BETWEEN THE BACK AND AHEAD STATIONS OF AN EQUATION" - Check the station listed and equations for errors.

Bridge Exceptions:

"CHECK BRIDGE CARD FOR SEQUENCE ACROSS THE STRUCTURE" - Stations on bridge exception listed are not increasing left to right.

Profile:

"GRADE EXCEEDS 12 PER CENT" - This is a warning. Earthwork run will proceed.

"TWO PREVIOUS VERTICAL CURVES OVERLAP" - Check the two P.I's

and vertical curve lengths listed just above this note as an overlap exists.

"BACK TANGENT HAS BEEN CHANGED TO MAKE A FIT" - If the length of vertical curve on the ahead P.I. can be changed to an unsymmetrical vertical curve, it will be changed and the earthwork run will proceed.

Templates:

"AN ATTEMPT HAS BEEN MADE TO RECALL A TEMPLATE THAT HAS NOT BEEN STORED" - Template definition has not been stored.

"RECALL VALUE IS TOO LARGE" - 40 is maximum.

"WHAT NOW COACH -- PUT SOMETHING IN THIS CARD" - No recall or slopes are given.

"NUMBER OF SEGMENTS NOT SAME AS PREVIOUS SECTION" - Because all segments are interpolated, numbers of segments should be equal. Processing continues but truncation may result in invalid results.

Slopes:

"SLOPE CODE IS NOT A, G, N, OR &" - Check cards for out-of-column punches or omission in Column 8.

"NO CUT SLOPES FOR THIS JOB" - The type "34" card has been omitted.

"THE NO. OF FIXED SLOPES IS EQUAL TO OR GREATER THAN THE TOTAL NO. OF SLOPES MINUS ONE" - This indicates there are no slopes specified in the type "35" card.

"NO BEGINNING NORMAL SELECTION" - All projects must be normal cut and fill specified, ("N" in column 27 of "35" Card). These may be augmented by "E" exceptions.

"NO FIXED SLOPES FOR THIS CUT SELECTION" - All cuts must have at least one slope fixed. Check columns 35-36 for error or

dummy-in a small fixed slope.

"NOT A, B, R, OR L, IN THE SIDE COLUMN" - Column 29 of the "35" Card must specify Right, Left, or Both.

"NOT A CUT OR FILL SELECTION" - Data in column 27 of the "35" Card is erroneous or missing.

"ZERO VERTICAL DISTANCE" - The limiting distance for this slope has either been omitted or entered as zero, either of which is illogical.

"THE BEGINNING SLOPE OF THE BENCH PATTERN IS NOT THE FIRST UNFIXED SLOPE". "ONLY ONE VALID SLOPE IN THE BENCHING PATTERN" - "NORMAL SELECTIONS ARE INCOMPLETE" - Only one slope selection card has been read. Check for omissions.

"TEMPLATE CODE IS NOT AN A, B, C, OR D" - Extraneous data has been entered in column 28 of the "35" Card.

Quantities:

"NOT A, C, OR F, ASSUMED F" - Cut or Fill has not been specified for the compaction factor. Fill will be assumed and processing continued.

"NO LISTED CUT OR FILL QUANTITIES FOR THIS CARD" - An Added Quantities (42) Card has no quantities to be added. Card is bypassed and processing continues.

SECTION 19

SAMPLE OUTPUT

```
 30291      SAMPLE OUTPUT                                                       *                DESIGN PARAMETERS   PAGE  1

RESET      PROFILE BEG         MODE TEMP   TEMP BEG      TEMP END
        9      0+00.00   100.00  2  A       0+00.00   20150+00.00


 EQUATIONS  .   BACK  =     AHEAD           LINE
       10      2+51.90  10001+54.80           X
       10      2+51.90  10001+54.80           A
       10  10040+16.00  10040+25.90           X
       10  10040+16.00  10040+25.90           A
       10  10133+99.70  20132+55.40           X
       10  10133+99.70  20132+55.40           A

BRIDGE       BERM BACK    ZERO AREA                ZERO AREA   BERM AHEAD
       11  10025+00.00  10026+00.00           A  10027+00.00  10028+00.00
       11  10080+00.00  10080+50.00           A  10080+75.00  10081+25.00

         P.I. STATION       ELEV      LENGTH              E
       12      0+00.00    5251.00      0      0  A       0.0
       12  10010+00.00    5255.00    500      0  A       0.0
       12  10030+00.00    5240.00   1000      0  A       0.0
       12  10050+00.00    5200.00    400    600  A       0.0
       12  10075+00.00    5175.00   2000      0  A       0.0
       12  10090+00.00    5150.00   1500      0  A       0.0

 TWO PREVIOUS VERTICAL CURVES OVERLAP

 BACK TANGENT HAS BEEN CHANGED TO MAKE A FIT
       12  10100+00.00    5130.00    500      0  A       0.0
       12  10125+00.00    5040.00    800    700  A       0.0
       12  20150+00.00    5005.00      0      0  A       0.0

 ODD  STATIONS               INT   T   ID
       13  10040+00.00     500.00  A  MED
       13  10100+00.00     100.00  A  MED
       13  10132+00.00     100.00  A  PIPE

  BEGIN SUPER            CROWN TRANS     SUPER
       16      0+00.00  0.020    100     0.040  L  A

     END SUPER            CROWN TRANS     SUPER
       17  10003+00.00  0.020    100     0.040  L  A

  BEGIN SUPER            CROWN TRANS     SUPER
       14  10050+00.00  0.020    300     0.060  R  A

     END SUPER            CROWN TRANS     SUPER
       15  10060+00.00  0.020    300     0.060  R  A

  BEGIN SUPER            CROWN TRANS     SUPER
       14  10065+00.00  0.020    150     0.040  L  A

     END SUPER            CROWN TRANS     SUPER
       15  10075+00.00  0.020    250     0.040  L  A
```

```
 BEGIN SUPER            CROWN TRANS     SUPER
      14  10080+00.00  0.020   250     0.050  L  A

    END SUPER            CROWN TRANS     SUPER
      15  10085+00.00  0.020   300     0.050  L  A

 BEGIN SUPER            CROWN TRANS     SUPER
      14  10090+00.00  0.020   300     0.060  R  A

    END SUPER            CROWN TRANS     SUPER
      15  10095+00.00  0.020   300     0.060  R  A

WIDENING                     TRANS        A   DR TP IDES2
      18        0+00.00           50      2.0  L  A  B
      18  10003+00.00            100      2.0  L  A  E
      18  10050+00.00            300      2.0  R  A  B
      18  10060+00.00            300      2.0  R  A  E

OFFSET       BASE STA = OFFSET STA      DIST DR TP
      19  10005+00.00  10005+00.00       0.0  L  A
      19  10010+00.00  10010+00.00      30.0  L  A
      19  10035+00.00  10035+00.00      30.0  L  A
      19  10040+00.00  10040+00.00       0.0  L  A
      19  10100+00.00  10100+00.00       0.0  L  A
      19  10110+00.00  10110+00.00      40.0  L  A
      19  20150+00.00  20150+00.00      40.0  L  A


TEMPLATE DESIGN INFORMATION

22  STATION     0+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST       6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10010+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST       6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10012+99.98 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST       6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10013+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 7  LTPP= 6  RTPP= 8
  SLOPE  -0.167  -0.020  -0.020  -0.020   0.020   0.020  -0.020  -0.167
  DIST       6.0     0.0    10.0    12.0    12.0    10.0     0.0     6.0

22  STATION 10015+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 7  LTPP= 6  RTPP= 8
  SLOPE  -0.167  -0.020  -0.020  -0.020   0.020   0.020  -0.020  -0.167
  DIST       6.0    10.0    10.0    12.0    12.0    10.0    10.0     6.0

22  STATION 10033+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 7  LTPP= 6  RTPP= 8
  SLOPE  -0.167  -0.020  -0.020  -0.020   0.020   0.020  -0.020  -0.167
  DIST       6.0    10.0    10.0    12.0    12.0    10.0    10.0     6.0
```

```
TEMPLATE DESIGN INFORMATION

22  STATION 10033+00.02 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10035+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10047+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10050+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE  -0.167  -0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10060+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE  -0.167  -0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10064+99.98 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10065+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 5  LTPP= 4  RTPP= 6
  SLOPE H-0.001 V 0.0    -0.020  -0.020  -0.020  -0.020 V 0.0   H-0.001
  DIST     10.0     3.0    10.0    12.0    12.0    10.0     3.0    10.0

22  STATION 10095+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 5  LTPP= 4  RTPP= 6
  SLOPE H-0.001 V 0.0    -0.020  -0.020  -0.020  -0.020 V 0.0   H-0.001
  DIST     10.0     3.0    10.0    12.0    12.0    10.0     3.0    10.0

22  STATION 10095+00.02 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10110+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10110+00.02 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 6  LTPP= 5  RTPP= 7
  SLOPE  -0.001   0.001   0.020   0.020  -0.020  -0.020   0.001  -0.001
  DIST     10.0     2.5    10.0    12.0    12.0    10.0     2.5    10.0

22  STATION 20140+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 6  LTPP= 5  RTPP= 7
  SLOPE  -0.167  -0.020   0.020   0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0     0.0    10.0    12.0    12.0    10.0     0.0     6.0

22  STATION 20150+00.00 TEMP A  S/F=S  SURFACE DEPTH= 1.00PROF GR= 6  LTPP= 5  RTPP= 7
  SLOPE  -0.167  -0.020   0.020   0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0     0.0    10.0    12.0    12.0    10.0     0.0     6.0
```

```
TABLE OF FILL SLOPES

        A/G/N/U               B/H/P/V               C/J/Q/W               D/K/R/X               E/L/S/Y               F/M/T/Z
  WID  VERT  SLOPE        WID  VERT  SLOPE        WID  VERT  SLOPE        WID  VERT  SLOPE        WID  VERT  SLOPE        WID  VERT  SLOPE
  0.0   5.0    6.00       0.0  10.0    4.00       0.0  15.0    3.00       2.0  20.0    2.00       2.0 999.9    1.50

TABLE OF CUT SLOPES

        A/G/N/U               B/H/P/V               C/J/Q/W               D/K/R/X               E/L/S/Y               F/M/T/Z
       VERT  SLOPE           VERT  SLOPE           VERT  SLOPE           VERT  SLOPE           VERT  SLOPE           VERT  SLOPE
       -1.0    6.00          -0.5   20.00           5.0    6.00          10.0    4.00          20.0    2.50         999.9    1.50
       10.0    0.50          -0.3   15.00

SLOPE SELECTIONS       N              C T S  TOL  HP     MIN     MAX  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17
       35       0+00.00    20150+00.00 C A B  0.0   2     0.0     0.0 IA CB CC  D  E  F
       35       0+00.00    20150+00.00 F A B  0.0   0     0.0     0.0  A  B  C  D  E
       35  10028+50.00 E  10031+50.00 C A L  0.0   2     0.0   120.0 IA CB CC  D  E  F
       35  10106+00.00 E  10121+00.00 C A L  5.0   2     0.0     0.0  A CB BG  H
       35  10107+00.00 E  10117+00.00 C A R  5.0   2     0.0     0.0  A CB BG  H


COMPACTION  FACTORS.                   MEANS STANDARD COMPACTION PLUS  0.0     PERCENT
      40       0+00.00  A   0.0    F
      40   10050+00.00  A   0.90000C    MEANS STANDARD COMPACTION PLUS  0.10000 PERCENT
      40   10100+00.00  A   0.10000F
      40   10130+00.00  A   1.10000F

ADDED QUANTITIES        T       CUT      FILL
      42   10010+00.00  A        210         0  DRAIN DITCH RT
      42   10010+05.00  A          0       210  DITCH BLOCK
      42   10050+00.00  A       1000       500  APPROACH LT
      42   10100+00.00  A        710      1210  APPROACH RT
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RESET       PROFILE BEG      .     MODE TEMP    TEMP BEG       TEMP END
       9       5+00.00    100.00  2  B   10005+00.00    20150+00.00


 EQUATIONS        BACK  =      AHEAD             LINE
       10        2+51.90  10001+54.80              B
       10   10040+16.00  10040+25.90              B
       10   10133+99.70  20132+55.40              B

BRIDGE          BERM BACK    ZERO AREA                    ZERO AREA    BERM AHEAD
       11   10027+00.00  10028+00.00              B  10029+00.00  10030+00.00
       11   10040+00.00  10040+00.01              B  10099+99.99  10100+00.00

         P.I. STATION        ELEV       LENGTH                 E
       12        0+00.00     5251.00       0       0  B        0.0
       12   10010+00.00     5255.00     500       0  B        0.0
       12   10030+00.00     5240.00    1000       0  B        0.0
       12   10050+00.00     5200.00     400     600  B        0.0
       12   10075+00.00     5175.00    2000       0  B        0.0
       12   10090+00.00     5150.00    1500       0  B        0.0

 TWO PREVIOUS VERTICAL CURVES OVERLAP

 BACK TANGENT HAS BEEN CHANGED TO MAKE A FIT
       12   10100+00.00     5130.00     500       0  B        0.0
       12   10125+00.00     5050.00     800     700  B        0.0
       12   20150+00.00     5005.00       0       0  B        0.0

 ODD  STATIONS               INT    T   ID
       13   10040+00.00       500.00  B  MED
       13   10100+00.00       100.00  B  MED
       13   10132+00.00       100.00  B  PIPE

 OFFSET        BASE STA = OFFSET STA       DIST OR TP
       19   10005+00.00  10005+00.00        0.0  R  B
       19   10010+00.00  10010+00.00       30.0  R  B
       19   10035+00.00  10035+00.00       30.0  R  B
       19   10040+00.00  10040+00.00        0.0  R  B
       19   20150+00.00  20150+00.00        0.0  R  B
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TEMPLATE DESIGN INFORMATION

22  STATION 10005+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10010+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10012+99.98 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10013+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 3  LTPP= 2  RTPP= 4
  SLOPE  -0.167  -0.020   0.020   0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0     0.0    10.0    12.0    12.0    10.0     0.0     6.0

22  STATION 10015+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 3  LTPP= 2  RTPP= 4
  SLOPE  -0.167  -0.020   0.020   0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0    10.0    10.0    12.0    12.0    10.0    10.0     6.0

22  STATION 10033+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 3  LTPP= 2  RTPP= 4
  SLOPE  -0.167  -0.020   0.020   0.020  -0.020  -0.020  -0.020  -0.167
  DIST      6.0    10.0    10.0    12.0    12.0    10.0    10.0     6.0

22  STATION 10033+00.02 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10035+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10040+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10100+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10110+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 4  LTPP= 3  RTPP= 5
  SLOPE H-0.167  -0.020  -0.020  -0.020  -0.020 H-0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 10110+00.02 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 3  LTPP= 2  RTPP= 4
  SLOPE  -0.167  -0.020  -0.020   0.020   0.020  -0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0

22  STATION 20150+00.00 TEMP B  S/F=S  SURFACE DEPTH= 1.00PROF GR= 3  LTPP= 2  RTPP= 4
  SLOPE  -0.167  -0.020  -0.020   0.020   0.020  -0.167
  DIST      6.0    10.0    12.0    12.0    10.0     6.0
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30291      SAMPLE OUTPUT                                          *                DESIGN PARAMETERS   PAGE  7

TABLE OF FILL SLOPES

       A/G/N/U                B/H/P/V                C/J/Q/W                D/K/R/X                E/L/S/Y                F/M/T/Z
 WID  VERT  SLOPE       WID  VERT  SLOPE       WID  VERT  SLOPE       WID  VERT  SLOPE       WID  VERT  SLOPE       WID  VERT  SLOPE
 0.0   5.0    6.00      0.0  10.0    4.00      0.0  15.0    3.00      2.0  20.0    2.00      2.0 999.9    1.50

TABLE OF CUT SLOPES

       A/G/N/U                B/H/P/V                C/J/Q/W                D/K/R/X                E/L/S/Y                F/M/T/Z
      VERT  SLOPE            VERT  SLOPE            VERT  SLOPE            VERT  SLOPE            VERT  SLOPE            VERT  SLOPE
      -1.0    6.00           -0.5   20.00            5.0    6.00           10.0    4.00           20.0    2.50          999.9    1.50
      10.0    0.50           -0.3   15.00

SLOPE SELECTIONS        N                C T S  TOL   HP     MIN     MAX  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17
      35      0+00.00     20150+00.00 C B B  0.0    2      0.0     0.0 IA CB CC  D  E  F
      35      0+00.00     20150+00.00 F B B  0.0    0      0.0     0.0  A  B  C  D  E


COMPACTION  FACTORS.
     40      0+00.00  B   1.00000F
     40  20150+00.00  B   1.00000F


  MEDIAN DESIGN INFORMATION
      STATION              A                B                C                D                E                F        SKIP LT RT

   10005+00.00        6.0  -1.0      50.0  -2.5       0.0   0.0       0.0   0.0       0.0   0.0       6.0  -1.0      0  A  B

   10015+00.00        6.0  -1.0      50.0  -2.5       0.0   0.0       0.0   0.0       0.0   0.0       6.0  -1.0      0  A  B

   10015+00.02        6.0  -1.0      10.0  -1.0      20.0  -1.0      20.0  -1.0      10.0  -1.0       6.0  -1.0      0  A  B

   10025+00.00        6.0  -1.0      10.0  -1.0      20.0  -1.0      20.0  -1.0      10.0  -1.0       6.0  -1.0      1  A  B

   10030+00.00        6.0  -1.0       0.0   0.0       0.0   0.0       0.0   0.0       0.0   0.0       6.0  -1.0      0  A  B

   10040+00.00        6.0  -1.0       0.0   0.0       0.0   0.0       0.0   0.0       0.0   0.0       6.0  -1.0      1  A  B

   10100+00.00       10.0  -0.5       0.0   0.0       0.0   0.0       0.0   0.0       0.0   0.0      10.0  -0.5      0  A  B

   20150+00.00       10.0  -0.5       0.0   0.0       0.0   0.0       0.0   0.0       0.0   0.0      10.0  -0.5      0  A  B
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JOB NO- 30291         SAMPLE OUTPUT                                                   *PAGE    1   03/26/69

  X-SEC STA       OFFSET STA  DESC TEMP  ELEVATION    GRADE     TAN. ELEV.   SHIFT   L WIDE R WIDE  DIR  SUPER
    0+99.99        0+99.99  PTS     X        0.0   0.0            0.0      0.0      0.0      0.0  L   -0.020
    0+00.00        0+00.00  VPI     A    5251.00    0.3646    5251.00      0.0      2.0      0.0  L    0.040
    0+00.00        0+00.00  PSC     X    5251.00    0.3646    5251.00      0.0      2.0      0.0  L    0.040
    0+99.90        0+99.90          A    5251.36    0.3646        0.0      0.0      2.0      0.0  L    0.040
    1+99.40        1+99.40          A    5251.73    0.3646        0.0      0.0      2.0      0.0  L    0.040
    2+51.90        2+51.90  EQBK    A    5251.92    0.3646        0.0      0.0      2.0      0.0  L    0.040
10001+54.80    10001+54.80  EQAH    A    5251.92    0.3646        0.0      0.0      2.0      0.0  L    0.040
10002+01.30    10002+01.30          A    5252.09    0.3646        0.0      0.0      2.0      0.0  L    0.040
10002+84.40    10002+84.40          A    5252.39    0.3646        0.0      0.0      2.0      0.0  L    0.040
10003+00.00    10003+00.00  PCS     X    5252.45    0.3646        0.0      0.0      2.0      0.0  L    0.040
10004+00.00    10004+00.00  PST     A    5252.81    0.3646        0.0      0.0      0.0      0.0  L   -0.020
10005+00.00    10005+00.00          A    5253.18    0.3646        0.0      0.0      0.0      0.0
10006+00.00    10006+00.00          A    5253.54    0.3646        0.0     -6.0      0.0      0.0
10006+93.00    10006+93.00          A    5253.88    0.3646        0.0    -11.6      0.0      0.0
10007+50.00    10007+50.00  VPC     X    5254.09    0.3646    5254.09    -15.0      0.0      0.0
10009+00.00    10009+00.00          A    5254.38    0.3646    5254.63    -24.0      0.0      0.0
10010+00.00    10010+00.00  VPI     A    5254.30   -0.7500    5255.00    -30.0      0.0      0.0
10011+00.00    10011+00.00          A    5253.99   -0.7500    5254.25    -30.0      0.0      0.0
10012+00.00    10012+00.00          A    5253.46   -0.7500    5253.50    -30.0      0.0      0.0
10012+50.00    10012+50.00  VPT     X    5253.12   -0.7500    5253.12    -30.0      0.0      0.0
10013+00.00    10013+00.00          A    5252.75   -0.7500        0.0    -30.0      0.0      0.0
10014+00.00    10014+00.00          A    5252.00   -0.7500        0.0    -30.0      0.0      0.0
10015+00.00    10015+00.00          A    5251.25   -0.7500        0.0    -30.0      0.0      0.0
10016+00.00    10016+00.00          A    5250.50   -0.7500        0.0    -30.0      0.0      0.0
10017+00.00    10017+00.00          A    5249.75   -0.7500        0.0    -30.0      0.0      0.0
10018+00.00    10018+00.00          A    5249.00   -0.7500        0.0    -30.0      0.0      0.0
10018+50.00    10018+50.00          A    5248.62   -0.7500        0.0    -30.0      0.0      0.0
10019+00.00    10019+00.00          A    5248.25   -0.7500        0.0    -30.0      0.0      0.0
10020+00.00    10020+00.00          A    5247.50   -0.7500        0.0    -30.0      0.0      0.0
10021+50.00    10021+50.00          A    5246.37   -0.7500        0.0    -30.0      0.0      0.0
10022+34.00    10022+34.00          A    5245.74   -0.7500        0.0    -30.0      0.0      0.0
10023+00.00    10023+00.00          A    5245.25   -0.7500        0.0    -30.0      0.0      0.0
10024+00.00    10024+00.00          A    5244.50   -0.7500        0.0    -30.0      0.0      0.0
10025+00.00    10025+00.00  BBRG    A    5243.75   -0.7500    5243.75    -30.0      0.0      0.0
10025+00.00    10025+00.00  VPC     X    5243.75   -0.7500    5243.75    -30.0      0.0      0.0
10026+00.00    10026+00.00          A    5242.93   -0.7500    5243.00    -30.0      0.0      0.0
10027+00.00    10027+00.00          A    5241.99   -0.7500    5242.25    -30.0      0.0      0.0
10028+00.00    10028+00.00  EBRG    A    5240.93   -0.7500    5241.50    -30.0      0.0      0.0
10029+00.00    10029+00.00          A    5239.74   -0.7500    5240.75    -30.0      0.0      0.0
10030+00.00    10030+00.00  VPI     X    5238.42   -2.0099    5240.00    -30.0      0.0      0.0
10031+00.00    10031+00.00          A    5236.98   -2.0099    5237.99    -30.0      0.0      0.0
10031+22.40    10031+22.40          A    5236.64   -2.0099    5237.54    -30.0      0.0      0.0
10031+98.30    10031+98.30          A    5235.44   -2.0099    5236.01    -30.0      0.0      0.0
10032+96.40    10032+96.40          A    5233.78   -2.0099    5234.04    -30.0      0.0      0.0
10033+94.70    10033+94.70          A    5232.00   -2.0099    5232.07    -30.0      0.0      0.0
10034+93.30    10034+93.30          A    5230.08   -2.0099    5230.08    -30.0      0.0      0.0
10035+00.00    10035+00.00  VPT     X    5229.95   -2.0099    5229.95    -30.0      0.0      0.0
10035+92.10    10035+92.10          A    5228.10   -2.0099        0.0    -24.5      0.0      0.0
10037+21.00    10037+21.00          A    5225.51   -2.0099        0.0    -16.7      0.0      0.0
10038+00.50    10038+00.50          A    5223.91   -2.0099        0.0    -12.0      0.0      0.0
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JOB NO- 30291          SAMPLE OUTPUT                                                        *PAGE    2   03/26/69

  X-SEC STA     OFFSET STA   DESC TEMP  ELEVATION     GRADE   TAN. ELEV.   SHIFT   L WIDE R WIDE  DIR   SUPER
10039+15.10   10039+15.10           A    5221.61   -2.0099       0.0      -5.1      0.0    0.0
10040+00.00   10040+00.00   MED     X    5219.90   -2.0099       0.0       0.0      0.0    0.0
10040+16.00   10040+16.00   EQBK    A    5219.58   -2.0099       0.0       0.0      0.0    0.0
10040+25.90   10040+25.90   EQAH    A    5219.58   -2.0099       0.0       0.0      0.0    0.0
10040+82.00   10040+82.00           A    5218.45   -2.0099       0.0       0.0      0.0    0.0
10046+00.00   10046+00.00   VPC     A    5208.04   -2.0099   5208.04       0.0      0.0    0.0  R  -0.020
10047+00.00   10047+00.00   PTS     X    5206.11   -2.0099   5206.03       0.0      0.0    0.0  R   0.0
10050+00.00   10050+00.00   VPI     X    5201.26   -1.0000   5200.00       0.0      0.0    2.0  R   0.060
10050+00.00   10050+00.00   PSC     X    5201.26   -1.0000   5200.00       0.0      0.0    2.0  R   0.060
10051+00.00   10051+00.00           A    5199.87   -1.0000   5199.00       0.0      0.0    2.0  R   0.060
10056+00.00   10056+00.00   VPT     A    5194.00   -1.0000   5194.00       0.0      0.0    2.0  R   0.060
10060+00.00   10060+00.00   PCS     X    5190.00   -1.0000       0.0       0.0      0.0    2.0  R   0.060
10061+00.00   10061+00.00           A    5189.00   -1.0000       0.0       0.0      0.0    1.3  R   0.040
10063+00.00   10063+00.00   PST     X    5187.00   -1.0000       0.0       0.0      0.0    0.0  R   0.0
10063+50.00   10063+50.00   PTS     X    5186.50   -1.0000       0.0       0.0      0.0    0.0  L   0.0
10065+00.00   10065+00.00   PSC     X    5185.00   -1.0000   5185.00       0.0      0.0    0.0  L   0.040
10065+00.00   10065+00.00   VPC     X    5185.00   -1.0000   5185.00       0.0      0.0    0.0  L   0.040
10066+00.00   10066+00.00           A    5183.98   -1.0000   5184.00       0.0      0.0    0.0  L   0.040
10071+00.00   10071+00.00           A    5178.39   -1.0000   5179.00       0.0      0.0    0.0  L   0.040
10075+00.00   10075+00.00   VPI     X    5173.33   -1.6667   5175.00       0.0      0.0    0.0  L   0.040
10075+00.00   10075+00.00   PCS     X    5173.33   -1.6667   5175.00       0.0      0.0    0.0  L   0.040
10076+00.00   10076+00.00           A    5171.98   -1.6667   5173.33       0.0      0.0    0.0  L   0.024
10077+50.00   10077+50.00   PTS     X    5169.89   -1.6667   5170.83       0.0      0.0    0.0  L   0.0
10077+50.00   10077+50.00   PST     X    5169.89   -1.6667   5170.83       0.0      0.0    0.0  L   0.0
10080+00.00   10080+00.00   BBRG    A    5166.25   -1.6667   5166.66       0.0      0.0    0.0  L   0.050
10080+00.00   10080+00.00   PSC     X    5166.25   -1.6667   5166.66       0.0      0.0    0.0  L   0.050
10080+50.00   10080+50.00           A    5165.49   -1.6667   5165.83       0.0      0.0    0.0  L   0.050
10080+75.00   10080+75.00           A    5165.11   -1.6667   5165.41       0.0      0.0    0.0  L   0.050
10081+25.00   10081+25.00   EBRG    A    5164.35   -1.6667   5164.58       0.0      0.0    0.0  L   0.050
10085+00.00   10085+00.00   PCS     X    5158.33   -1.6667   5158.33       0.0      0.0    0.0  L   0.050
10085+00.00   10085+00.00   VPC     X    5158.33   -1.6667   5158.33       0.0      0.0    0.0  L   0.050
10085+00.00   10085+00.00   VPT     X    5158.33   -1.6667   5158.33       0.0      0.0    0.0  L   0.050
10086+00.00   10086+00.00           A    5156.64   -1.6667   5156.66       0.0      0.0    0.0  L   0.030
10087+45.45   10087+45.45   PTS     X    5154.11   -1.6667   5154.24       0.0      0.0    0.0  L   0.0
10087+45.45   10087+45.45   PST     X    5154.11   -1.6667   5154.24       0.0      0.0    0.0  L   0.0
10090+00.00   10090+00.00   VPI     X    5149.48   -2.0000   5150.00       0.0      0.0    0.0  R   0.060
10090+00.00   10090+00.00   PSC     X    5149.48   -2.0000   5150.00       0.0      0.0    0.0  R   0.060
10091+00.00   10091+00.00           A    5147.60   -2.0000   5148.00       0.0      0.0    0.0  R   0.060
10095+00.00   10095+00.00   PCS     X    5139.94   -2.0000   5140.00       0.0      0.0    0.0  R   0.060
10096+00.00   10096+00.00           A    5137.97   -2.0000   5138.00       0.0      0.0    0.0  R   0.040
10097+50.00   10097+50.00   VPC     X    5135.00   -2.0000   5135.00       0.0      0.0    0.0  R   0.010
10097+50.00   10097+50.00   VPT     X    5135.00   -2.0000   5135.00       0.0      0.0    0.0  R   0.010
10098+00.00   10098+00.00   PST     X    5133.95   -2.0000   5134.00       0.0      0.0    0.0  R   0.0
10100+00.00   10100+00.00   MED     X    5129.00   -3.6000   5130.00       0.0      0.0    0.0
10100+00.00   10100+00.00   VPI     X    5129.00   -3.6000   5130.00       0.0      0.0    0.0
10101+00.00   10101+00.00           A    5126.04   -3.6000   5126.40      -4.0      0.0    0.0
10102+00.00   10102+00.00           A    5122.75   -3.6000   5122.80      -8.0      0.0    0.0
10102+50.00   10102+50.00   VPT     X    5121.00   -3.6000   5121.00     -10.0      0.0    0.0
10103+00.00   10103+00.00           A    5119.20   -3.6000       0.0     -12.0      0.0    0.0
10104+00.00   10104+00.00           A    5115.60   -3.6000       0.0     -16.0      0.0    0.0
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  X-SEC STA      OFFSET STA    DESC TEMP  ELEVATION     GRADE   TAN. ELEV.   SHIFT    L WIDE R WIDE  DIR   SUPER
10105+00.00     10105+00.00           A     5112.00   -3.6000       0.0      -20.0        0.0     0.0
10106+00.00     10106+00.00           A     5108.40   -3.6000       0.0      -24.0        0.0     0.0
10107+00.00     10107+00.00           A     5104.80   -3.6000       0.0      -28.0        0.0     0.0
10108+00.00     10108+00.00           A     5101.20   -3.6000       0.0      -32.0        0.0     0.0
10109+13.20     10109+13.20           A     5097.12   -3.6000       0.0      -36.5        0.0     0.0
10110+00.00     10110+00.00           A     5094.00   -3.6000       0.0      -40.0        0.0     0.0
10111+00.00     10111+00.00           A     5090.40   -3.6000       0.0      -40.0        0.0     0.0
10112+00.00     10112+00.00           A     5086.80   -3.6000       0.0      -40.0        0.0     0.0
10113+00.00     10113+00.00           A     5083.20   -3.6000       0.0      -40.0        0.0     0.0
10114+00.00     10114+00.00           A     5079.60   -3.6000       0.0      -40.0        0.0     0.0
10115+00.00     10115+00.00           A     5076.00   -3.6000       0.0      -40.0        0.0     0.0
10116+00.00     10116+00.00           A     5072.40   -3.6000       0.0      -40.0        0.0     0.0
10117+00.00     10117+00.00    VPC    A     5068.80   -3.6000    5068.80     -40.0        0.0     0.0
10118+00.00     10118+00.00           A     5065.26   -3.6000    5065.20     -40.0        0.0     0.0
10119+00.00     10119+00.00           A     5061.86   -3.6000    5061.60     -40.0        0.0     0.0
10119+67.00     10119+67.00           A     5059.66   -3.6000    5059.18     -40.0        0.0     0.0
10120+75.00     10120+75.00           A     5056.23   -3.6000    5055.30     -40.0        0.0     0.0
10122+00.00     10122+00.00           A     5052.46   -3.6000    5050.80     -40.0        0.0     0.0
10123+00.00     10123+00.00           A     5049.59   -3.6000    5047.20     -40.0        0.0     0.0
10123+74.00     10123+74.00           A     5047.56   -3.6000    5044.53     -40.0        0.0     0.0
10125+00.00     10125+00.00    VPI    A     5044.26   -1.3236    5040.00     -40.0        0.0     0.0
10125+83.00     10125+83.00           A     5042.21   -1.3236    5038.90     -40.0        0.0     0.0
10127+00.00     10127+00.00           A     5039.53   -1.3236    5037.35     -40.0        0.0     0.0
10128+00.00     10128+00.00           A     5037.42   -1.3236    5036.03     -40.0        0.0     0.0
10129+00.00     10129+00.00           A     5035.48   -1.3236    5034.70     -40.0        0.0     0.0
10130+00.00     10130+00.00           A     5033.73   -1.3236    5033.38     -40.0        0.0     0.0
10130+67.00     10130+67.00           A     5032.64   -1.3236    5032.49     -40.0        0.0     0.0
10132+00.00     10132+00.00    PIPE   X     5030.73   -1.3236    5030.73     -40.0        0.0     0.0
10132+00.00     10132+00.00    VPT    X     5030.73   -1.3236    5030.73     -40.0        0.0     0.0
10132+00.00     10132+00.00           A     5030.73   -1.3236    5030.73     -40.0        0.0     0.0
10132+75.00     10132+75.00           A     5029.74   -1.3236       0.0      -40.0        0.0     0.0
10133+99.70     10133+99.70    EQBK   A     5028.09   -1.3236       0.0      -40.0        0.0     0.0
20132+55.40     20132+55.40    EQAH   A     5028.09   -1.3236       0.0      -40.0        0.0     0.0
20132+65.00     20132+65.00           A     5027.96   -1.3236       0.0      -40.0        0.0     0.0
20134+00.00     20134+00.00           A     5026.18   -1.3236       0.0      -40.0        0.0     0.0
20135+00.00     20135+00.00           A     5024.85   -1.3236       0.0      -40.0        0.0     0.0
20136+00.00     20136+00.00           A     5023.53   -1.3236       0.0      -40.0        0.0     0.0
20137+00.00     20137+00.00           A     5022.20   -1.3236       0.0      -40.0        0.0     0.0
20138+00.00     20138+00.00           A     5020.88   -1.3236       0.0      -40.0        0.0     0.0
20139+00.00     20139+00.00           A     5019.56   -1.3236       0.0      -40.0        0.0     0.0
20140+00.00     20140+00.00           A     5018.23   -1.3236       0.0      -40.0        0.0     0.0
20141+00.00     20141+00.00           A     5016.91   -1.3236       0.0      -40.0        0.0     0.0
20141+33.00     20141+33.00           A     5016.47   -1.3236       0.0      -40.0        0.0     0.0
20143+00.00     20143+00.00           A     5014.26   -1.3236       0.0      -40.0        0.0     0.0
20144+00.00     20144+00.00           A     5012.94   -1.3236       0.0      -40.0        0.0     0.0
20145+00.00     20145+00.00           A     5011.61   -1.3236       0.0      -40.0        0.0     0.0
20146+00.00     20146+00.00           A     5010.29   -1.3236       0.0      -40.0        0.0     0.0
20147+00.00     20147+00.00           A     5008.97   -1.3236       0.0      -40.0        0.0     0.0
20148+00.00     20148+00.00           A     5007.64   -1.3236       0.0      -40.0        0.0     0.0
20149+00.00     20149+00.00           A     5006.32   -1.3236       0.0      -40.0        0.0     0.0
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JOB NO- 30291         SAMPLE OUTPUT                                                             *PAGE    4   03/26/69

  X-SEC STA      OFFSET STA   DESC TEMP  ELEVATION    GRADE    TAN. ELEV.  SHIFT    L WIDE R WIDE  DIR   SUPER
20150+00.00    20150+00.00  VPI     A     5005.00    0.0           0.0     -40.0        0.0    0.0
END OF PROFILE
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JOB NO- 30291        SAMPLE OUTPUT                                                            *PAGE    1   03/26/69


  X-SEC STA       OFFSET STA    DESC TEMP  ELEVATION    GRADE    TAN. ELEV.  SHIFT    L WIDE R WIDE  DIR   SUPER
10002+01.30     10002+01.30          B      5252.09   0.3646        0.0       0.0        0.0    0.0
10002+84.40     10002+84.40          B      5252.39   0.3646        0.0       0.0        0.0    0.0
10004+00.00     10004+00.00          B      5252.81   0.3646        0.0       0.0        0.0    0.0
10005+00.00     10005+00.00          B      5253.18   0.3646        0.0       0.0        0.0    0.0
10006+00.00     10006+00.00          B      5253.54   0.3646        0.0       6.0        0.0    0.0
10006+93.00     10006+93.00          B      5253.88   0.3646        0.0      11.6        0.0    0.0
10007+50.00     10007+50.00   VPC    X      5254.09   0.3646    5254.09      15.0        0.0    0.0
10009+00.00     10009+00.00          B      5254.38   0.3646    5254.63      24.0        0.0    0.0
10010+00.00     10010+00.00   VPI    B      5254.30  -0.7500    5255.00      30.0        0.0    0.0
10011+00.00     10011+00.00          B      5253.99  -0.7500    5254.25      30.0        0.0    0.0
10012+00.00     10012+00.00          B      5253.46  -0.7500    5253.50      30.0        0.0    0.0
10012+50.00     10012+50.00   VPT    X      5253.12  -0.7500    5253.12      30.0        0.0    0.0
10013+00.00     10013+00.00          B      5252.75  -0.7500        0.0      30.0        0.0    0.0
10014+00.00     10014+00.00          B      5252.00  -0.7500        0.0      30.0        0.0    0.0
10015+00.00     10015+00.00          B      5251.25  -0.7500        0.0      30.0        0.0    0.0
10016+00.00     10016+00.00          B      5250.50  -0.7500        0.0      30.0        0.0    0.0
10017+00.00     10017+00.00          B      5249.75  -0.7500        0.0      30.0        0.0    0.0
10018+00.00     10018+00.00          B      5249.00  -0.7500        0.0      30.0        0.0    0.0
10018+50.00     10018+50.00          B      5248.62  -0.7500        0.0      30.0        0.0    0.0
10019+00.00     10019+00.00          B      5248.25  -0.7500        0.0      30.0        0.0    0.0
10020+00.00     10020+00.00          B      5247.50  -0.7500        0.0      30.0        0.0    0.0
10021+50.00     10021+50.00          B      5246.37  -0.7500        0.0      30.0        0.0    0.0
10022+34.00     10022+34.00          B      5245.74  -0.7500        0.0      30.0        0.0    0.0
10023+00.00     10023+00.00          B      5245.25  -0.7500        0.0      30.0        0.0    0.0
10024+00.00     10024+00.00          B      5244.50  -0.7500        0.0      30.0        0.0    0.0
10025+00.00     10025+00.00   VPC    B      5243.75  -0.7500    5243.75      30.0        0.0    0.0
10026+59.00     10026+59.00          B      5242.39  -0.7500    5242.55      30.0        0.0    0.0
10027+00.00     10027+00.00   BBRG   B      5241.99  -0.7500    5242.25      30.0        0.0    0.0
10028+00.00     10028+00.00          B      5240.93  -0.7500    5241.50      30.0        0.0    0.0
10029+00.00     10029+00.00          B      5239.74  -0.7500    5240.75      30.0        0.0    0.0
10030+00.00     10030+00.00   EBRG   B      5238.42  -2.0099    5240.00      30.0        0.0    0.0
10030+00.00     10030+00.00   VPI    X      5238.42  -2.0099    5240.00      30.0        0.0    0.0
10031+00.00     10031+00.00          B      5236.98  -2.0099    5237.99      30.0        0.0    0.0
10031+22.40     10031+22.40          B      5236.64  -2.0099    5237.54      30.0        0.0    0.0
10031+98.30     10031+98.30          B      5235.44  -2.0099    5236.01      30.0        0.0    0.0
10032+96.40     10032+96.40          B      5233.78  -2.0099    5234.04      30.0        0.0    0.0
10033+94.70     10033+94.70          B      5232.00  -2.0099    5232.07      30.0        0.0    0.0
10034+93.30     10034+93.30          B      5230.08  -2.0099    5230.08      30.0        0.0    0.0
10035+00.00     10035+00.00   VPT    X      5229.95  -2.0099    5229.95      30.0        0.0    0.0
10035+92.10     10035+92.10          B      5228.10  -2.0099        0.0      24.5        0.0    0.0
10037+21.00     10037+21.00          B      5225.51  -2.0099        0.0      16.7        0.0    0.0
10038+00.50     10038+00.50          B      5223.91  -2.0099        0.0      12.0        0.0    0.0
10039+15.10     10039+15.10          B      5221.61  -2.0099        0.0       5.1        0.0    0.0
10040+00.00     10040+00.00   BBRG   B      5219.90  -2.0099        0.0       0.0        0.0    0.0
10040+00.00     10040+00.00   MED    X      5219.90  -2.0099        0.0       0.0        0.0    0.0
10040+00.01     10040+00.01          B      5219.90  -2.0099        0.0       0.0        0.0    0.0
10040+16.00     10040+16.00   EQBK   B      5219.58  -2.0099        0.0       0.0        0.0    0.0
10040+25.90     10040+25.90   EQAH   B      5219.58  -2.0099        0.0       0.0        0.0    0.0
10046+00.00     10046+00.00   VPC    B      5208.04  -2.0099    5208.04       0.0        0.0    0.0
10050+00.00     10050+00.00   VPI    B      5201.26  -1.0000    5200.00       0.0        0.0    0.0
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JOB NO- 30291          SAMPLE OUTPUT                                              *PAGE    2   03/26/69


  X-SEC STA       OFFSET STA   DESC TEMP  ELEVATION    GRADE    TAN. ELEV.  SHIFT   L WIDE R WIDE  DIR   SUPER
10056+00.00     10056+00.00  VPT     8     5194.00   -1.0000    5194.00     0.0        0.0    0.0
10065+00.00     10065+00.00  VPC     8     5185.00   -1.0000    5185.00     0.0        0.0    0.0
10075+00.00     10075+00.00  VPI     8     5173.33   -1.6667    5175.00     0.0        0.0    0.0
10085+00.00     10085+00.00  VPC     8     5158.33   -1.6667    5158.33     0.0        0.0    0.0
10085+00.00     10085+00.00  VPT     X     5158.33   -1.6667    5158.33     0.0        0.0    0.0
10090+00.00     10090+00.00  VPI     B     5149.48   -2.0000    5150.00     0.0        0.0    0.0
10097+50.00     10097+50.00  VPC     8     5135.00   -2.0000    5135.00     0.0        0.0    0.0
10097+50.00     10097+50.00  VPT     X     5135.00   -2.0000    5135.00     0.0        0.0    0.0
10099+99.99     10099+99.99          8     5129.25   -2.0000    5130.00     0.0        0.0    0.0
10100+00.00     10100+00.00  MED     X     5129.25   -3.2000    5130.00     0.0        0.0    0.0
10100+00.00     10100+00.00  VPI     X     5129.25   -3.2000    5130.00     0.0        0.0    0.0
10100+00.00     10100+00.00  EBRG    B     5129.25   -3.2000    5130.00     0.0        0.0    0.0
10101+00.00     10101+00.00          8     5126.52   -3.2000    5126.80     0.0        0.0    0.0
10102+00.00     10102+00.00          B     5123.57   -3.2000    5123.60     0.0        0.0    0.0
10102+50.00     10102+50.00  VPT     X     5122.00   -3.2000    5122.00     0.0        0.0    0.0
10103+00.00     10103+00.00          8     5120.40   -3.2000       0.0      0.0        0.0    0.0
10104+00.00     10104+00.00          B     5117.20   -3.2000       0.0      0.0        0.0    0.0
10105+00.00     10105+00.00          8     5114.00   -3.2000       0.0      0.0        0.0    0.0
10106+00.00     10106+00.00          B     5110.80   -3.2000       0.0      0.0        0.0    0.0
10107+00.00     10107+00.00          B     5107.60   -3.2000       0.0      0.0        0.0    0.0
10108+00.00     10108+00.00          B     5104.40   -3.2000       0.0      0.0        0.0    0.0
10109+13.20     10109+13.20          B     5100.77   -3.2000       0.0      0.0        0.0    0.0
10110+00.00     10110+00.00          8     5098.00   -3.2000       0.0      0.0        0.0    0.0
10111+00.00     10111+00.00          8     5094.80   -3.2000       0.0      0.0        0.0    0.0
10112+00.00     10112+00.00          8     5091.60   -3.2000       0.0      0.0        0.0    0.0
10113+00.00     10113+00.00          8     5088.40   -3.2000       0.0      0.0        0.0    0.0
10114+00.00     10114+00.00          B     5085.20   -3.2000       0.0      0.0        0.0    0.0
10115+00.00     10115+00.00          8     5082.00   -3.2000       0.0      0.0        0.0    0.0
10116+00.00     10116+00.00          8     5078.80   -3.2000       0.0      0.0        0.0    0.0
10117+00.00     10117+00.00  VPC     B     5075.60   -3.2000    5075.60     0.0        0.0    0.0
10118+00.00     10118+00.00          8     5072.44   -3.2000    5072.40     0.0        0.0    0.0
10119+00.00     10119+00.00          8     5069.37   -3.2000    5069.20     0.0        0.0    0.0
10119+67.00     10119+67.00          B     5067.37   -3.2000    5067.05     0.0        0.0    0.0
10120+75.00     10120+75.00          B     5064.21   -3.2000    5063.60     0.0        0.0    0.0
10122+00.00     10122+00.00          8     5060.69   -3.2000    5059.60     0.0        0.0    0.0
10123+00.00     10123+00.00          B     5057.98   -3.2000    5056.40     0.0        0.0    0.0
10123+74.00     10123+74.00          B     5056.02   -3.2000    5054.03     0.0        0.0    0.0
10125+00.00     10125+00.00  VPI     B     5052.80   -1.7018    5050.00     0.0        0.0    0.0
10125+83.00     10125+83.00          8     5050.77   -1.7018    5048.59     0.0        0.0    0.0
10127+00.00     10127+00.00          B     5048.02   -1.7018    5046.59     0.0        0.0    0.0
10128+00.00     10128+00.00          8     5045.80   -1.7018    5044.89     0.0        0.0    0.0
10129+00.00     10129+00.00          B     5043.71   -1.7018    5043.19     0.0        0.0    0.0
10130+00.00     10130+00.00          B     5041.71   -1.7018    5041.49     0.0        0.0    0.0
10130+67.00     10130+67.00          B     5040.45   -1.7018    5040.35     0.0        0.0    0.0
10132+00.00     10132+00.00  PIPE    X     5038.09   -1.7018    5038.09     0.0        0.0    0.0
10132+00.00     10132+00.00  VPT     X     5038.09   -1.7018    5038.09     0.0        0.0    0.0
10132+00.00     10132+00.00          B     5038.09   -1.7018    5038.09     0.0        0.0    0.0
10132+75.00     10132+75.00          B     5036.81   -1.7018       0.0      0.0        0.0    0.0
10133+99.70     10133+99.70  EQBK    B     5034.69   -1.7018       0.0      0.0        0.0    0.0
20132+55.40     20132+55.40  EQAH    B     5034.69   -1.7018       0.0      0.0        0.0    0.0
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JOB NO- 30291        SAMPLE OUTPUT                                                               *PAGE    3   03/26/69


  X-SEC STA      OFFSET STA   DESC TEMP  ELEVATION     GRADE    TAN. ELEV.   SHIFT    L WIDE R WIDE  DIR   SUPER
20132+65.00     20132+65.00          B     5034.52   -1.7018        0.0        0.0        0.0    0.0
20134+00.00     20134+00.00          B     5032.23   -1.7018        0.0        0.0        0.0    0.0
20135+00.00     20135+00.00          B     5030.52   -1.7018        0.0        0.0        0.0    0.0
20136+00.00     20136+00.00          B     5028.82   -1.7018        0.0        0.0        0.0    0.0
20137+00.00     20137+00.00          B     5027.12   -1.7018        0.0        0.0        0.0    0.0
20138+00.00     20138+00.00          B     5025.42   -1.7018        0.0        0.0        0.0    0.0
20139+00.00     20139+00.00          B     5023.71   -1.7018        0.0        0.0        0.0    0.0
20140+00.00     20140+00.00          B     5022.02   -1.7018        0.0        0.0        0.0    0.0
20141+00.00     20141+00.00          B     5020.31   -1.7018        0.0        0.0        0.0    0.0
20141+33.00     20141+33.00          B     5019.75   -1.7018        0.0        0.0        0.0    0.0
20143+00.00     20143+00.00          B     5016.91   -1.7018        0.0        0.0        0.0    0.0
20144+00.00     20144+00.00          B     5015.21   -1.7018        0.0        0.0        0.0    0.0
20145+00.00     20145+00.00          B     5013.50   -1.7018        0.0        0.0        0.0    0.0
20146+00.00     20146+00.00          B     5011.80   -1.7018        0.0        0.0        0.0    0.0
20147+00.00     20147+00.00          B     5010.10   -1.7018        0.0        0.0        0.0    0.0
20148+00.00     20148+00.00          B     5008.40   -1.7018        0.0        0.0        0.0    0.0
20149+00.00     20149+00.00          B     5006.70   -1.7018        0.0        0.0        0.0    0.0
20150+00.00     20150+00.00  VPI     B     5005.00    0.0           0.0        0.0        0.0    0.0
END OF PROFILE
END OF FINAL OUTPUT.
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IDENT30291        SAMPLE OUTPUT                                                  DATE 03/26/69  PAGE     1

     BASE STATION     OFFSET STATION      ****** LEFT *********        ******* RIGHT*********
                        TEMPLATE A         CATCH    C/F    SLOPE        SLOPE    C/F     CATCH

          0+00.00          0+00.00        -52.0     3.7F     6.0          1.5    31.2C    100.9
          0+99.90          0+99.90        -58.1     7.0F     4.0          6.0     3.6F     49.3
          1+99.40          1+99.40        -50.8     3.5F     6.0          4.0     6.6F     54.3
          2+51.90          2+51.90        -59.6     4.9F     6.0          4.0     7.6F     58.2
      10001+54.80      10001+54.80        -59.6     4.9F     6.0          4.0     7.6F     58.2
      10002+01.30      10002+01.30        -55.4     6.4F     4.0          6.0     3.3F     47.5
      10002+84.40      10002+84.40        -65.0    11.7F     3.0          6.0     3.4F     48.2
      10004+00.00      10004+00.00        -69.5    13.8F     3.0          6.0     4.4F     54.5
      10005+00.00      10005+00.00        -78.7    17.3F     2.9          2.9    18.3F     80.5
      10005+00.02      10005+00.00        -78.7    17.3F     2.9          3.8    18.1F     97.5
      10006+00.00      10006+00.00        -81.9    15.3F     3.1          2.7    24.0F     99.2
      10006+93.00      10006+93.00        -68.5     7.2F     4.0          2.9    21.5F    101.0
      10009+00.00      10009+00.00       -109.0     7.8C     4.0         19.9     0.1F     60.6
      10010+00.00      10010+00.00       -109.4     6.3C     4.0          4.0     7.8F     89.3
      10011+00.00      10011+00.00       -106.7     5.7C     4.0          4.0     7.4F     87.5
      10012+00.00      10012+00.00       -107.6     5.9C     4.0          4.0     9.1F     94.2
      10013+00.00      10013+00.00       -127.6     5.4C     4.0          3.0    10.6F    111.8
      10014+00.00      10014+00.00       -132.1     5.3C     4.0          3.5    18.5F    150.5
      10015+00.00      10015+00.00       -145.8     5.0C     6.0          3.0    13.6F    130.9
      10016+00.00      10016+00.00       -143.1     4.5C     6.0          4.0     8.4F    123.5
      10017+00.00      10017+00.00       -137.9     3.6C     6.0          6.0     0.3C    109.2
      10018+00.00      10018+00.00       -132.4     2.7C     6.0          6.0     1.7C    126.0
      10018+50.00      10018+50.00       -130.4     2.4C     6.0          6.0     0.6C    113.1
      10019+00.00      10019+00.00       -131.7     2.6C     6.0          6.0     1.7F    100.2
      10020+00.00      10020+00.00       -128.5     2.1C     6.0         11.6     0.0C    106.1
      10021+50.00      10021+50.00       -116.4     0.9C     6.0          6.1     0.2C    108.4
      10022+34.00      10022+34.00       -136.7     3.4C     6.0          6.0     3.5F    110.7
      10023+00.00      10023+00.00       -136.2     5.0C     4.0          6.0     4.0F    114.0
      10024+00.00      10024+00.00       -137.6     5.4C     4.0          6.0     4.9F    119.2
      10025+00.00      10025+00.00       -145.2     7.3C     4.0          6.0     3.5F    111.0
      10025+00.02      10025+00.00       -145.2     7.3C     4.0          6.0     1.4F     -5.5
      10026+00.00      10026+00.00        -90.0     1.0F     6.0          6.0     1.0F    -14.0
      10027+00.00      10027+00.00        -90.0     1.0F     6.0          6.0     1.0F    -14.0
      10028+00.00      10028+00.00       -144.6    11.4C     2.5          6.0     2.9C     29.1
      10029+00.00      10029+00.00       -150.0    14.3C     2.5          6.0     3.4C     32.4
      10031+00.00      10031+00.00       -150.0    18.4C     2.4          4.0     8.2C     44.7
      10031+00.02      10031+00.00       -150.0    18.4C     2.4          2.5     2.0C    116.2
      10031+22.40      10031+22.40       -146.3    20.2C     1.5          6.0     3.4C    136.3
      10031+98.30      10031+98.30       -155.9    23.3C     1.5          4.0     6.0C    140.2
      10032+96.40      10032+96.40       -151.8    23.8C     1.5          4.0     6.4C    141.6
      10033+94.70      10033+94.70       -116.6    21.7C     1.5          4.0     7.7C    114.9
      10034+93.30      10034+93.30       -127.4    17.4C     2.5          4.0     6.4C    109.8
      10035+92.10      10035+92.10       -116.1     9.4C     4.0          6.0     2.9F     70.1
      10037+21.00      10037+21.00       -109.9     9.8C     4.0          6.0     2.2C     84.0
      10038+00.50      10038+00.50       -104.8    25.9C     1.5          4.0     9.7C    104.7
      10039+15.10      10039+15.10        -92.5    22.3C     1.5          2.5    14.6C     95.6
      10039+15.12      10039+15.10        -92.5    22.3C     1.5          2.5    16.0C     88.9
      10040+16.00      10040+16.00        -86.6    21.8C     1.5          2.5    15.2C     91.9
      10040+25.90      10040+25.90        -86.6    21.8C     1.5          2.5    15.2C     91.9
      10040+82.00      10040+82.00        -84.7    20.5C     1.5          2.5    13.5C     87.7
      10046+00.00      10046+00.00        -80.6    10.7C     2.5          6.0     3.8C     76.6
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IDENT30291        SAMPLE OUTPUT                                                    DATE 03/26/69  PAGE    2

  BASE STATION    OFFSET STATION      ****** LEFT *********        ******* RIGHT*********
                    TEMPLATE A         CATCH   C/F    SLOPE         SLOPE   C/F     CATCH

  10051+00.00      10051+00.00         -73.7   4.9C    4.0            4.0   6.0C    80.2
  10056+00.00      10056+00.00         -67.3   2.2C    6.0            4.0   5.7C    78.8
  10061+00.00      10061+00.00         -46.1   0.3C    6.0            6.0   1.9C    66.6
  10066+00.00      10066+00.00         -42.5   1.8F    6.0            4.0   5.3F    53.0
  10071+00.00      10071+00.00         -49.9   3.0F    6.0            6.0   4.5F    59.2
  10076+00.00      10076+00.00         -51.2   3.2F    6.0            6.0   3.8F    55.1
  10080+00.00      10080+00.00         -52.3   3.4F    6.0            6.0   4.7F    60.2
  10080+50.00      10080+50.00         -32.0   0.0F  853.3          853.3   0.0F    32.0
  10080+75.00      10080+75.00         -32.0   0.0F  853.3          853.3   0.0F    32.0
  10081+25.00      10081+25.00         -51.9   3.3F    6.0            6.0   3.5F    52.9
  10086+00.00      10086+00.00         -40.7   1.5F    6.0            6.0   0.5C    54.2
  10091+00.00      10091+00.00         -46.0   2.3F    6.0            6.0   2.0C    70.2
  10096+00.00      10096+00.00         -83.7   4.9C    6.0            6.0   4.1C    78.5
  10101+00.00      10101+00.00         -83.5  10.2C    2.5            2.5  10.4C    76.0
  10101+00.02      10101+00.00         -83.5  10.2C    2.5            4.0   9.6C    92.5
  10102+00.00      10102+00.00         -91.9  11.9C    2.5            2.5  11.7C    83.1
  10103+00.00      10103+00.00        -102.6  14.6C    2.5            2.5  14.3C    89.7
  10104+00.00      10104+00.00        -110.5  16.2C    2.5            2.5  16.4C    95.1
  10105+00.00      10105+00.00        -116.7  17.1C    2.5            2.5  16.9C    96.3
  10106+00.00      10106+00.00         -88.2  10.7C    0.5            2.5  18.6C   100.5
  10107+00.00      10107+00.00         -93.7  12.2C    0.5            0.5  11.2C    64.7
  10108+00.00      10108+00.00         -99.9  14.4C    0.5            0.5  12.0C    65.5
  10109+13.20      10109+13.20        -107.2   7.6C    0.5            0.5   5.3C    68.3
  10110+00.00      10110+00.00        -113.5  10.5C    0.5            0.5   7.9C    82.9
  10111+00.00      10111+00.00        -132.8  11.5C    0.5            0.5   8.2C    83.3
  10112+00.00      10112+00.00        -135.1  14.0C    0.5            0.5   7.7C    82.7
  10113+00.00      10113+00.00        -134.7  13.8C    0.5            0.5  10.5C    85.5
  10114+00.00      10114+00.00        -137.4   7.3C    0.5            0.5   5.5C    80.5
  10115+00.00      10115+00.00        -138.1   8.1C    0.5            0.5  13.1C    78.6
  10116+00.00      10116+00.00        -140.2  10.5C    0.5            0.5   9.3C    74.8
  10117+00.00      10117+00.00        -146.0   6.9C    0.5            2.5  11.2C    94.1
  10118+00.00      10118+00.00        -115.1   0.6F   14.9            2.5  10.3C    91.8
  10119+00.00      10119+00.00        -130.6  10.9C    0.5            2.5  18.6C   112.4
  10119+67.00      10119+67.00        -124.6   5.1C    0.5            2.5  15.6C   105.0
  10120+75.00      10120+75.00        -127.9   8.7C    0.5            6.0   4.1C    90.7
  10122+00.00      10122+00.00        -155.4  30.3C    1.5            6.0   4.4F    66.3
  10123+00.00      10123+00.00        -141.0  12.5C    2.5            3.0  14.7F    84.0
  10123+74.00      10123+74.00        -134.9   6.3C    4.0            3.0  13.6F    80.8
  10125+00.00      10125+00.00        -101.6   3.0F    6.0            3.1  17.6F    93.7
  10125+83.00      10125+83.00        -108.4   6.3F    4.0            4.0   8.8F    75.3
  10127+00.00      10127+00.00        -120.6   1.9C    6.0            4.0   7.8F    71.4
  10128+00.00      10128+00.00        -124.9   2.7C    6.0            4.0   6.9F    67.5
  10129+00.00      10129+00.00        -125.3   2.8C    6.0            3.0   6.7F    60.2
  10130+00.00      10130+00.00        -125.1   2.8C    6.0            4.0   7.4F    69.4
  10130+67.00      10130+67.00        -125.1   2.8C    6.0            4.0   6.5F    65.9
  10132+00.00      10132+00.00        -128.6   3.4C    6.0            6.0   3.1F    58.6
  10132+75.00      10132+75.00        -127.6   3.3C    6.0            6.0   0.5C    62.3
  10133+99.70      10133+99.70        -122.6   2.5C    6.0            6.0   0.4C    61.3
  20132+55.40      20132+55.40        -122.6   2.5C    6.0            6.0   0.4C    61.3
  20132+65.00      20132+65.00        -124.3   2.8C    6.0            6.0   0.5C    62.0
  20134+00.00      20134+00.00        -137.9   7.7C    4.0            6.0   0.5C    62.2
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IDENT30291        SAMPLE OUTPUT                                                    DATE 03/26/69  PAGE    3

   BASE STATION    OFFSET STATION      ****** LEFT *********      ******* RIGHT*********
                     TEMPLATE A          CATCH    C/F     SLOPE      SLOPE   C/F      CATCH

   20135+00.00     20135+00.00        -136.6    4.9C     6.0        6.0     1.9C     67.6
   20136+00.00     20136+00.00        -129.8    5.7C     4.0        4.0     1.6C     62.6
   20137+00.00     20137+00.00        -127.8    5.3C     4.0        2.5    12.9C     98.3
   20138+00.00     20138+00.00        -132.7    4.4C     6.0        4.0     8.0C     97.9
   20139+00.00     20139+00.00        -129.8    3.9C     6.0        0.0     6.1C     56.0
   20140+00.00     20140+00.00        -130.7    4.1C     6.0        0.0    10.0C     56.0
   20141+00.00     20141+00.00        -124.6    3.1C     6.0        1.5   198.8C    364.2
   20141+33.00     20141+33.00        -126.7    3.5C     6.0        1.5    56.2C    150.4
   20143+00.00     20143+00.00        -119.8    2.3C     6.0        1.5    70.0C    171.0
   20144+00.00     20144+00.00        -121.0    2.5C     6.0        1.5    13.0C     85.5
   20145+00.00     20145+00.00        -119.6    2.3C     6.0        2.5    10.6C     92.4
   20146+00.00     20146+00.00        -118.6    2.1C     6.0        1.5     9.8C     80.7
   20147+00.00     20147+00.00        -115.9    1.7C     6.0        1.5    10.3C     81.4
   20148+00.00     20148+00.00        -117.6    1.9C     6.0        2.5    13.6C     99.9
   20149+00.00     20149+00.00        -118.2    2.0C     6.0        2.5    15.5C    104.8
   20150+00.00     20150+00.00        -121.6    2.6C     6.0        1.5    26.7C    111.1
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IDENT30291       SAMPLE OUTPUT                                                                  DATE 03/26/69  PAGE    4
                   TEMPLATE LISTING FOR TEMPLATE A

BASE STATION      0+00.00  OFFSET STATION      0+00.00      PROFILE AT DISTANCE    0.0
   5244.36/ -52.0      5248.02/ -30.0      5249.36/ -22.0     5249.76/ -12.0     5250.23/   0.0     5250.71/  12.0     5251.11/  22.0
   5250.11/  28.0      5249.11/  34.0      5248.61/  44.0     5273.18/  80.9     5279.46/  90.9     5284.98/ 100.9

BASE STATION      0+99.90  OFFSET STATION      0+99.90      PROFILE AT DISTANCE    0.0
   5241.36/ -58.1      5248.38/ -30.0      5249.72/ -22.0     5250.12/ -12.0     5250.60/   0.0     5251.07/  12.0     5251.47/  22.0
   5250.47/  28.0      5246.91/  49.3

BASE STATION      1+99.40  OFFSET STATION      1+99.40      PROFILE AT DISTANCE    0.0
   5245.28/ -50.8      5248.75/ -30.0      5250.08/ -22.0     5250.48/ -12.0     5250.96/   0.0     5251.44/  12.0     5251.84/  22.0
   5250.83/  28.0      5244.25/  54.3

BASE STATION      2+51.90  OFFSET STATION      2+51.90      PROFILE AT DISTANCE    0.0
   5244.00/ -59.6      5248.94/ -30.0      5250.27/ -22.0     5250.68/ -12.0     5251.15/   0.0     5251.63/  12.0     5252.03/  22.0
   5251.02/  28.0      5243.46/  58.2

BASE STATION 10001+54.80  OFFSET STATION 10001+54.80      PROFILE AT DISTANCE    0.0
   5244.00/ -59.6      5248.94/ -30.0      5250.27/ -22.0     5250.68/ -12.0     5251.15/   0.0     5251.63/  12.0     5252.03/  22.0
   5251.02/  28.0      5243.46/  58.2

BASE STATION 10002+01.30  OFFSET STATION 10002+01.30      PROFILE AT DISTANCE    0.0
   5242.75/ -55.4      5249.11/ -30.0      5250.44/ -22.0     5250.84/ -12.0     5251.32/   0.0     5251.80/  12.0     5252.20/  22.0
   5251.19/  28.0      5247.94/  47.5

BASE STATION 10002+84.40  OFFSET STATION 10002+84.40      PROFILE AT DISTANCE    0.0
   5237.75/ -65.0      5249.41/ -30.0      5250.75/ -22.0     5251.15/ -12.0     5251.63/   0.0     5252.10/  12.0     5252.50/  22.0
   5251.50/  28.0      5248.13/  48.2

BASE STATION 10004+00.00  OFFSET STATION 10004+00.00      PROFILE AT DISTANCE    0.0
   5236.52/ -69.5      5250.36/ -28.0      5251.37/ -22.0     5251.57/ -12.0     5251.81/   0.0     5251.57/  12.0     5251.36/  22.0
   5250.36/  28.0      5245.94/  54.5

BASE STATION 10005+00.00  OFFSET STATION 10005+00.00      PROFILE AT DISTANCE    0.0
   5233.38/ -78.7      5250.73/ -28.0      5251.73/ -22.0     5251.93/ -12.0     5252.18/   0.0     5251.93/  12.0     5251.73/  22.0
   5250.73/  28.0      5232.47/  80.5

BASE STATION 10005+00.02  OFFSET STATION 10005+00.00      PROFILE AT DISTANCE    0.0
   5233.38/ -78.7      5250.73/ -28.0      5251.73/ -22.0     5251.93/ -12.0     5252.18/   0.0     5251.93/  12.0     5251.73/  22.0
   5251.19/  25.0      5250.73/  28.0      5232.65/  97.5

BASE STATION 10006+00.00  OFFSET STATION 10006+00.00      PROFILE AT DISTANCE   -6.0
   5235.76/ -81.9      5251.09/ -34.0      5252.09/ -28.0     5252.30/ -18.0     5252.54/  -6.0     5252.41/   0.0     5252.54/   6.0
   5252.30/  18.0      5252.09/  28.0      5251.09/  34.0     5227.11/  99.2

BASE STATION 10006+93.00  OFFSET STATION 10006+93.00      PROFILE AT DISTANCE  -11.6
   5244.20/ -68.5      5251.43/ -39.6      5252.43/ -33.6     5252.64/ -23.6     5252.88/ -11.6     5252.64/   0.0     5252.88/  11.6
   5252.64/  23.6      5252.43/  33.6      5251.43/  39.6     5229.95/ 101.0

BASE STATION 10009+00.00  OFFSET STATION 10009+00.00      PROFILE AT DISTANCE  -24.0
   5258.48/-109.0      5257.63/ -99.0      5255.68/ -89.0     5250.43/ -68.0     5250.93/ -58.0     5251.93/ -52.0     5252.93/ -46.0
   5253.14/ -36.0      5253.38/ -24.0      5253.14/ -12.0     5252.93/  -2.0     5252.59/   0.0     5252.93/   2.0     5253.14/  12.0
   5253.38/  24.0      5253.14/  36.0      5252.93/  46.0     5251.93/  52.0     5250.93/  58.0     5250.80/  60.6
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IDENT30291        SAMPLE OUTPUT                                                    DATE 03/26/69  PAGE    5
                   TEMPLATE LISTING FOR TEMPLATE A

BASE STATION 10010+00.00  OFFSET STATION 10010+00.00      PROFILE AT DISTANCE  -30.0
   5257.06/-109.4     5256.16/ -99.4     5254.19/ -89.4     5250.35/ -74.0     5250.85/ -64.0     5251.85/ -58.0     5252.86/ -52.0
   5253.06/ -42.0     5253.30/ -30.0     5253.06/ -18.0     5252.86/  -8.0     5251.85/  -2.0     5251.51/   0.0     5251.85/   2.0
   5252.86/   8.0     5253.06/  18.0     5253.30/  30.0     5253.06/  42.0     5252.86/  52.0     5251.85/  58.0     5244.02/  89.3

BASE STATION 10011+00.00  OFFSET STATION 10011+00.00      PROFILE AT DISTANCE  -30.0
   5255.96/-106.7     5255.16/ -96.7     5253.22/ -86.7     5250.04/ -74.0     5250.54/ -64.0     5251.54/ -58.0     5252.55/ -52.0
   5252.75/ -42.0     5252.99/ -30.0     5252.75/ -18.0     5252.55/  -8.0     5251.54/  -2.0     5251.20/   0.0     5251.54/   2.0
   5252.55/   8.0     5252.75/  18.0     5252.99/  30.0     5252.75/  42.0     5252.55/  52.0     5251.54/  58.0     5244.17/  87.5

BASE STATION 10012+00.00  OFFSET STATION 10012+00.00      PROFILE AT DISTANCE  -30.0
   5255.52/-107.6     5254.82/ -97.6     5252.93/ -87.6     5249.52/ -74.0     5250.02/ -64.0     5251.02/ -58.0     5252.02/ -52.0
   5252.22/ -42.0     5252.46/ -30.0     5252.22/ -18.0     5252.02/  -8.0     5251.02/  -2.0     5250.68/   0.0     5251.02/   2.0
   5252.02/   8.0     5252.22/  18.0     5252.46/  30.0     5252.22/  42.0     5252.02/  52.0     5251.02/  58.0     5241.96/  94.2

BASE STATION 10013+00.00  OFFSET STATION 10013+00.00      PROFILE AT DISTANCE  -30.0
   5254.79/-127.6     5254.05/-117.6     5252.14/-107.6     5249.23/ -96.0     5249.73/ -86.0     5250.73/ -80.0     5251.74/ -74.0
   5251.74/ -74.0     5251.94/ -64.0     5252.18/ -52.0     5251.95/ -40.0     5251.75/ -30.0     5251.75/ -30.0     5250.74/ -24.0
   5249.74/ -18.0     5250.74/  24.0     5251.75/  30.0     5251.75/  30.0     5251.95/  40.0     5252.18/  52.0     5251.94/  64.0
   5251.74/  74.0     5251.74/  74.0     5250.73/  80.0     5240.13/ 111.8

BASE STATION 10014+00.00  OFFSET STATION 10014+00.00      PROFILE AT DISTANCE  -30.0
   5253.84/-132.1     5253.08/-122.1     5251.16/-112.1     5248.38/-101.0     5248.88/ -91.0     5249.88/ -85.0     5250.89/ -79.0
   5250.99/ -74.0     5251.19/ -64.0     5251.43/ -52.0     5251.20/ -40.0     5251.00/ -30.0     5250.89/ -25.0     5249.89/ -19.0
   5248.89/ -13.0     5249.89/  19.0     5250.89/  25.0     5251.00/  30.0     5251.20/  40.0     5251.43/  52.0     5251.19/  64.0
   5250.99/  74.0     5250.89/  79.0     5249.88/  85.0     5231.35/ 150.5

BASE STATION 10015+00.00  OFFSET STATION 10015+00.00      PROFILE AT DISTANCE  -30.0
   5252.34/-145.8     5252.04/-135.8     5250.82/-125.8     5247.53/-106.0     5248.03/ -96.0     5249.03/ -90.0     5250.04/ -84.0
   5250.24/ -74.0     5250.44/ -64.0     5250.68/ -52.0     5250.45/ -40.0     5250.25/ -30.0     5250.04/ -20.0     5249.04/ -14.0
   5248.04/  -8.0     5249.04/  14.0     5250.04/  20.0     5250.25/  30.0     5250.45/  40.0     5250.68/  52.0     5250.44/  64.0
   5250.24/  74.0     5250.04/  84.0     5249.03/  90.0     5235.39/ 130.9

BASE STATION 10016+00.00  OFFSET STATION 10016+00.00      PROFILE AT DISTANCE  -30.0
   5251.34/-143.1     5250.89/-133.1     5249.63/-123.1     5246.78/-106.0     5247.28/ -96.0     5248.28/ -90.0     5249.29/ -84.0
   5249.49/ -74.0     5249.69/ -64.0     5249.93/ -52.0     5249.70/ -40.0     5249.50/ -30.0     5249.29/ -20.0     5248.29/ -14.0
   5247.29/  -8.0     5246.48/   0.0     5247.29/   8.0     5248.29/  14.0     5249.29/  20.0     5249.50/  30.0     5249.70/  40.0
   5249.93/  52.0     5249.69/  64.0     5249.49/  74.0     5249.29/  84.0     5248.28/  90.0     5239.89/ 123.5

BASE STATION 10017+00.00  OFFSET STATION 10017+00.00      PROFILE AT DISTANCE  -30.0
   5249.72/-137.9     5249.27/-127.9     5248.01/-117.9     5246.03/-106.0     5246.53/ -96.0     5247.53/ -90.0     5248.54/ -84.0
   5248.74/ -74.0     5248.94/ -64.0     5249.18/ -52.0     5248.95/ -40.0     5248.75/ -30.0     5248.54/ -20.0     5247.54/ -14.0
   5246.54/  -8.0     5245.73/   0.0     5246.54/   8.0     5247.54/  14.0     5248.54/  20.0     5248.75/  30.0     5248.95/  40.0
   5249.18/  52.0     5248.94/  64.0     5248.74/  74.0     5248.54/  84.0     5247.53/  90.0     5246.53/  96.0     5246.03/ 106.0
   5246.02/ 107.6     5245.47/ 109.2

BASE STATION 10018+00.00  OFFSET STATION 10018+00.00      PROFILE AT DISTANCE  -30.0
   5248.00/-132.4     5247.59/-122.4     5246.35/-112.4     5245.28/-106.0     5245.78/ -96.0     5246.78/ -90.0     5247.79/ -84.0
   5247.99/ -74.0     5248.19/ -64.0     5248.43/ -52.0     5248.20/ -40.0     5248.00/ -30.0     5247.79/ -20.0     5246.79/ -14.0
   5245.79/  -8.0     5244.98/   0.0     5245.79/   8.0     5246.79/  14.0     5247.79/  20.0     5248.00/  30.0     5248.20/  40.0
   5248.43/  52.0     5248.19/  64.0     5247.99/  74.0     5247.79/  84.0     5246.78/  90.0     5245.78/  96.0     5245.28/ 106.0
   5245.28/ 106.0     5245.30/ 116.0     5242.05/ 126.0
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BASE STATION 10018+50.00  OFFSET STATION 10018+50.00       PROFILE AT DISTANCE  -30.0
   5247.25/-130.4     5246.88/-120.4     5245.64/-110.4    5244.91/-106.0     5245.41/ -96.0     5246.41/ -90.0     5247.41/ -84.0
   5247.51/ -74.0     5247.82/ -64.0     5248.06/ -52.0    5247.82/ -40.0     5247.62/ -30.0     5247.42/ -20.0     5246.41/ -14.0
   5245.41/  -8.0     5244.61/   0.0     5245.41/   8.0    5246.41/  14.0     5247.42/  20.0     5247.62/  30.0     5247.82/  40.0
   5248.06/  52.0     5247.82/  64.0     5247.61/  74.0    5247.41/  84.0     5246.41/  90.0     5245.41/  96.0     5244.91/ 106.0
   5245.38/ 109.6     5245.63/ 113.1

BASE STATION 10019+00.00  OFFSET STATION 10019+00.00       PROFILE AT DISTANCE  -30.0
   5247.00/-131.7     5246.69/-121.7     5245.48/-111.7    5244.53/-106.0     5245.03/ -96.0     5246.03/ -90.0     5247.04/ -84.0
   5247.24/ -74.0     5247.44/ -64.0     5247.68/ -52.0    5247.45/ -40.0     5247.25/ -30.0     5247.04/ -20.0     5246.04/ -14.0
   5245.04/  -8.0     5244.23/   0.0     5245.04/   8.0    5246.04/  14.0     5247.04/  20.0     5247.25/  30.0     5247.45/  40.0
   5247.68/  52.0     5247.44/  64.0     5247.24/  74.0    5247.04/  84.0     5246.03/  90.0     5244.34/ 100.2

BASE STATION 10020+00.00  OFFSET STATION 10020+00.00       PROFILE AT DISTANCE  -30.0
   5245.82/-128.5     5245.43/-118.5     5244.20/-108.5    5243.78/-106.0     5244.28/ -96.0     5245.28/ -90.0     5246.29/ -84.0
   5246.49/ -74.0     5246.69/ -64.0     5246.93/ -52.0    5246.70/ -40.0     5246.50/ -30.0     5246.29/ -20.0     5245.29/ -14.0
   5244.29/  -8.0     5243.48/   0.0     5244.29/   8.0    5245.29/  14.0     5246.29/  20.0     5246.50/  30.0     5246.70/  40.0
   5246.93/  52.0     5246.69/  64.0     5246.49/  74.0    5246.29/  84.0     5245.28/  90.0     5244.28/  96.0     5243.78/ 106.0
   5243.78/ 106.0     5243.79/ 106.1

BASE STATION 10021+50.00  OFFSET STATION 10021+50.00       PROFILE AT DISTANCE  -30.0
   5243.57/-116.4     5243.32/-111.2     5242.66/-106.0    5243.16/ -96.0     5244.16/ -90.0     5245.16/ -84.0     5245.36/ -74.0
   5245.57/ -64.0     5245.81/ -52.0     5245.57/ -40.0    5245.37/ -30.0     5245.17/ -20.0     5244.16/ -14.0     5243.16/  -8.0
   5242.36/   0.0     5243.16/   8.0     5244.16/  14.0    5245.17/  20.0     5245.37/  30.0     5245.57/  40.0     5245.81/  52.0
   5245.57/  64.0     5245.36/  74.0     5245.16/  84.0    5244.16/  90.0     5243.16/  96.0     5242.66/ 106.0     5242.69/ 107.2
   5242.39/ 108.4

BASE STATION 10022+34.00  OFFSET STATION 10022+34.00       PROFILE AT DISTANCE  -30.0
   5245.71/-136.7     5245.12/-126.7     5243.81/-116.7    5242.03/-106.0     5242.53/ -96.0     5243.53/ -90.0     5244.53/ -84.0
   5244.73/ -74.0     5244.94/ -64.0     5245.18/ -52.0    5244.94/ -40.0     5244.74/ -30.0     5244.54/ -20.0     5243.54/ -14.0
   5242.54/  -8.0     5241.73/   0.0     5242.54/   8.0    5243.54/  14.0     5244.54/  20.0     5244.74/  30.0     5244.94/  40.0
   5245.18/  52.0     5244.94/  64.0     5244.73/  74.0    5244.53/  84.0     5243.53/  90.0     5240.07/ 110.7

BASE STATION 10023+00.00  OFFSET STATION 10023+00.00       PROFILE AT DISTANCE  -30.0
   5246.89/-136.2     5246.02/-126.2     5244.07/-116.2    5241.53/-106.0     5242.03/ -96.0     5243.03/ -90.0     5244.04/ -84.0
   5244.24/ -74.0     5244.44/ -64.0     5244.68/ -52.0    5244.45/ -40.0     5244.25/ -30.0     5244.04/ -20.0     5243.04/ -14.0
   5242.04/  -8.0     5241.23/   0.0     5242.04/   8.0    5243.04/  14.0     5244.04/  20.0     5244.25/  30.0     5244.45/  40.0
   5244.68/  52.0     5244.44/  64.0     5244.24/  74.0    5244.04/  84.0     5243.03/  90.0     5239.03/ 114.0

BASE STATION 10024+00.00  OFFSET STATION 10024+00.00       PROFILE AT DISTANCE  -30.0
   5246.89/-137.6     5245.73/-127.6     5243.67/-117.6    5240.78/-106.0     5241.28/ -96.0     5242.28/ -90.0     5243.29/ -84.0
   5243.49/ -74.0     5243.69/ -64.0     5243.93/ -52.0    5243.70/ -40.0     5243.50/ -30.0     5243.29/ -20.0     5242.29/ -14.0
   5241.29/  -8.0     5240.48/   0.0     5241.29/   8.0    5242.29/  14.0     5243.29/  20.0     5243.50/  30.0     5243.70/  40.0
   5243.93/  52.0     5243.69/  64.0     5243.49/  74.0    5243.29/  84.0     5242.28/  90.0     5237.41/ 119.2

BASE STATION 10025+00.00  OFFSET STATION 10025+00.00       PROFILE AT DISTANCE  -30.0
   5247.91/-145.2     5246.86/-135.2     5244.84/-125.2    5240.03/-106.0     5240.53/ -96.0     5241.53/ -90.0     5242.54/ -84.0
   5242.74/ -74.0     5242.94/ -64.0     5243.18/ -52.0    5242.95/ -40.0     5242.75/ -30.0     5242.54/ -20.0     5241.54/ -14.0
   5240.54/  -8.0     5239.73/   0.0     5240.54/   8.0    5241.54/  14.0     5242.54/  20.0     5242.75/  30.0     5242.95/  40.0
   5243.18/  52.0     5242.94/  64.0     5242.74/  74.0    5242.54/  84.0     5241.53/  90.0     5238.04/ 111.0
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 IDENT30291       SAMPLE OUTPUT                                                     DATE 03/26/69  PAGE    7
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BASE STATION 10025+00.02  OFFSET STATION 10025+00.00       PROFILE AT DISTANCE  -30.0
   5247.91/-145.2    5246.86/-135.2    5244.84/-125.2    5240.03/-106.0    5240.53/ -96.0    5241.53/ -90.0    5242.54/ -84.0
   5242.74/ -74.0    5242.94/ -64.0    5243.18/ -52.0    5242.95/ -40.0    5242.75/ -30.0    5242.54/ -20.0    5241.54/ -14.0
   5240.13/  -5.5

BASE STATION 10026+00.00  OFFSET STATION 10026+00.00       PROFILE AT DISTANCE  -30.0
   5240.71/ -90.0    5241.72/ -84.0    5241.92/ -74.0    5242.13/ -64.0    5242.37/ -52.0    5242.13/ -40.0    5241.93/ -30.0
   5241.73/ -20.0    5240.72/ -14.0

BASE STATION 10027+00.00  OFFSET STATION 10027+00.00       PROFILE AT DISTANCE  -30.0
   5239.78/ -90.0    5240.78/ -84.0    5240.98/ -74.0    5241.19/ -64.0    5241.43/ -52.0    5241.19/ -40.0    5240.99/ -30.0
   5240.79/ -20.0    5239.79/ -14.0

BASE STATION 10028+00.00  OFFSET STATION 10028+00.00       PROFILE AT DISTANCE  -30.0
   5249.21/-144.6    5247.79/-134.6    5244.65/-124.6    5237.21/-106.0    5237.71/ -96.0    5238.71/ -90.0    5239.71/ -84.0
   5239.92/ -74.0    5240.12/ -64.0    5240.36/ -52.0    5240.13/ -40.0    5239.93/ -30.0    5239.72/ -20.0    5238.72/ -14.0
   5237.72/  -8.0    5237.22/   2.0    5238.40/   9.1    5239.26/  19.1    5238.51/  29.1

BASE STATION 10029+00.00  OFFSET STATION 10029+00.00       PROFILE AT DISTANCE  -30.0
   5251.27/-150.0    5249.71/-141.7    5246.98/-133.4    5236.02/-106.0    5236.52/ -96.0    5237.52/ -90.0    5238.53/ -84.0
   5238.73/ -74.0    5238.93/ -64.0    5239.18/ -52.0    5238.94/ -40.0    5238.74/ -30.0    5238.54/ -20.0    5237.53/ -14.0
   5236.53/  -8.0    5236.03/   2.0    5237.76/  12.4    5238.22/  22.4    5236.27/  32.4

BASE STATION 10031+00.00  OFFSET STATION 10031+00.00       PROFILE AT DISTANCE  -30.0
   5251.70/-150.0    5233.27/-106.0    5233.77/ -96.0    5234.77/ -90.0    5235.77/ -84.0    5235.97/ -74.0    5236.18/ -64.0
   5236.42/ -52.0    5236.18/ -40.0    5235.98/ -30.0    5235.78/ -20.0    5234.77/ -14.0    5233.77/  -8.0    5233.27/   2.0
   5238.94/  24.7    5240.69/  34.7    5240.96/  44.7

BASE STATION 10031+00.02  OFFSET STATION 10031+00.00       PROFILE AT DISTANCE  -30.0
   5251.70/-150.0    5233.27/-106.0    5233.77/ -96.0    5234.77/ -90.0    5235.77/ -84.0    5235.97/ -74.0    5236.18/ -64.0
   5236.42/ -52.0    5236.18/ -40.0    5235.98/ -30.0    5235.78/ -20.0    5234.77/ -14.0    5233.77/  -8.0    5233.77/   8.0
   5234.77/  14.0    5235.78/  20.0    5235.98/  30.0    5236.18/  40.0    5236.42/  52.0    5236.18/  64.0    5235.97/  74.0
   5235.77/  84.0    5234.77/  90.0    5233.77/  96.0    5233.27/ 106.0    5235.04/ 111.1    5236.27/ 116.2

BASE STATION 10031+22.40  OFFSET STATION 10031+22.40       PROFILE AT DISTANCE  -30.0
   5253.26/-146.3    5251.50/-136.3    5246.46/-126.3    5232.93/-106.0    5233.43/ -96.0    5234.43/ -90.0    5235.43/ -84.0
   5235.63/ -74.0    5235.84/ -64.0    5236.08/ -52.0    5235.84/ -40.0    5235.64/ -30.0    5235.44/ -20.0    5234.43/ -14.0
   5233.43/  -8.0    5233.43/   8.0    5234.43/  14.0    5235.44/  20.0    5235.64/  30.0    5235.84/  40.0    5236.08/  52.0
   5235.84/  64.0    5235.63/  74.0    5235.43/  84.0    5234.43/  90.0    5233.43/  96.0    5232.93/ 106.0    5234.64/ 116.3
   5235.72/ 126.3    5235.63/ 136.3

BASE STATION 10031+98.30  OFFSET STATION 10031+98.30       PROFILE AT DISTANCE  -30.0
   5254.97/-155.9    5252.49/-140.9    5245.00/-125.9    5231.72/-106.0    5232.22/ -96.0    5233.22/ -90.0    5234.23/ -84.0
   5234.43/ -74.0    5234.63/ -64.0    5234.88/ -52.0    5234.64/ -40.0    5234.44/ -30.0    5234.23/ -20.0    5233.23/ -14.0
   5232.23/  -8.0    5232.23/   8.0    5233.23/  14.0    5234.23/  20.0    5234.44/  30.0    5234.64/  40.0    5234.88/  52.0
   5234.63/  64.0    5234.43/  74.0    5234.23/  84.0    5233.22/  90.0    5232.22/  96.0    5231.72/ 106.0    5235.26/ 120.2
   5236.98/ 130.2    5237.12/ 140.2

BASE STATION 10032+96.40  OFFSET STATION 10032+96.40       PROFILE AT DISTANCE  -30.0
   5254.71/-151.8    5252.43/-141.8    5247.23/-131.8    5230.06/-106.0    5230.56/ -96.0    5231.56/ -90.0    5232.57/ -84.0
   5232.77/ -74.0    5232.97/ -64.0    5233.21/ -52.0    5232.98/ -40.0    5232.78/ -30.0    5232.57/ -20.0    5231.57/ -14.0
   5230.57/  -8.0    5230.57/   8.0    5231.57/  14.0    5232.57/  20.0    5232.78/  30.0    5232.98/  40.0    5233.21/  52.0
   5232.97/  64.0    5232.77/  74.0    5232.57/  84.0    5231.56/  90.0    5230.56/  96.0    5230.06/ 106.0    5233.95/ 121.6
   5235.67/ 131.6    5235.85/ 141.6
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BASE STATION 10033+94.70  OFFSET STATION 10033+94.70      PROFILE AT DISTANCE  -30.0
   5250.47/-116.6     5248.26/-106.6     5243.08/ -96.6     5228.05/ -74.0     5228.55/ -64.0     5229.55/ -58.0     5230.55/ -52.0
   5230.75/ -42.0     5231.00/ -30.0     5230.75/ -18.0     5230.55/  -8.0     5229.55/  -2.0     5229.21/   0.0     5229.55/   2.0
   5230.55/   8.0     5230.75/  18.0     5231.00/  30.0     5230.75/  42.0     5230.55/  52.0     5229.55/  58.0     5228.55/  64.0
   5228.05/  74.0     5233.28/  94.9     5234.88/ 104.9     5234.70/ 114.9

BASE STATION 10034+93.30  OFFSET STATION 10034+93.30      PROFILE AT DISTANCE  -30.0
   5243.46/-127.4     5242.48/-117.4     5239.50/-107.4     5226.13/ -74.0     5226.63/ -64.0     5227.63/ -58.0     5228.63/ -52.0
   5228.84/ -42.0     5229.08/ -30.0     5228.84/ -18.0     5228.63/  -8.0     5227.63/  -2.0     5227.29/   0.0     5227.63/   2.0
   5228.63/   8.0     5228.84/  18.0     5229.08/  30.0     5228.84/  42.0     5228.63/  52.0     5227.63/  58.0     5226.63/  64.0
   5226.13/  74.0     5230.07/  89.8     5231.75/  99.8     5231.78/ 109.8

BASE STATION 10035+92.10  OFFSET STATION 10035+92.10      PROFILE AT DISTANCE  -24.5
   5235.00/-116.1     5233.28/-106.1     5231.04/ -96.1     5224.15/ -68.5     5224.65/ -58.5     5225.65/ -52.5     5226.65/ -46.5
   5226.86/ -36.5     5227.10/ -24.5     5226.86/ -12.5     5226.65/  -2.5     5226.23/   0.0     5226.65/   2.5     5226.86/  12.5
   5227.10/  24.5     5226.86/  36.5     5226.65/  46.5     5225.65/  52.5     5222.71/  70.1

BASE STATION 10037+21.00  OFFSET STATION 10037+21.00      PROFILE AT DISTANCE  -16.7
   5231.39/-109.9     5230.73/ -99.9     5228.84/ -89.9     5221.56/ -60.7     5222.06/ -50.7     5223.06/ -44.7     5224.06/ -38.7
   5224.27/ -28.7     5224.51/ -16.7     5224.27/  -4.7     5224.16/   0.0     5224.27/   4.7     5224.51/  16.7     5224.27/  28.7
   5224.06/  38.7     5223.06/  44.7     5222.06/  50.7     5221.56/  60.7     5222.10/  64.0     5223.31/  74.0     5223.63/  84.0

BASE STATION 10038+00.50  OFFSET STATION 10038+00.50      PROFILE AT DISTANCE  -12.0
   5246.84/-104.8     5244.45/ -94.8     5239.21/ -84.8     5219.96/ -56.0     5220.46/ -46.0     5221.46/ -40.0     5222.46/ -34.0
   5222.67/ -24.0     5222.91/ -12.0     5222.66/   0.0     5222.91/  12.0     5222.67/  24.0     5222.46/  34.0     5221.46/  40.0
   5220.46/  46.0     5219.96/  56.0     5227.13/  84.7     5228.89/  94.7     5229.19/ 104.7

BASE STATION 10039+15.10  OFFSET STATION 10039+15.10      PROFILE AT DISTANCE   -5.1
   5240.50/ -92.5     5238.42/ -82.5     5233.28/ -72.5     5217.66/ -49.1     5218.16/ -39.1     5219.16/ -33.1     5220.16/ -27.1
   5220.36/ -17.1     5220.61/  -5.1     5220.50/   0.0     5220.61/   5.1     5220.36/  17.1     5220.16/  27.1     5219.16/  33.1
   5218.16/  39.1     5217.66/  49.1     5228.27/  75.6     5230.52/  85.6     5229.28/  95.6

BASE STATION 10039+15.12  OFFSET STATION 10039+15.10      PROFILE AT DISTANCE   -5.1
   5240.50/ -92.5     5238.42/ -82.5     5233.28/ -72.5     5217.66/ -49.1     5218.16/ -39.1     5219.16/ -33.1     5220.16/ -27.1
   5220.36/ -17.1     5220.61/  -5.1     5220.36/   6.9     5220.16/  16.9     5219.16/  22.9     5218.16/  28.9     5217.66/  38.9
   5229.64/  68.9     5231.63/  78.9     5229.61/  88.9

BASE STATION 10040+16.00  OFFSET STATION 10040+16.00      PROFILE AT DISTANCE    0.0
   5238.02/ -86.6     5235.87/ -76.6     5230.71/ -66.6     5215.63/ -44.0     5216.13/ -34.0     5217.13/ -28.0     5218.13/ -22.0
   5218.34/ -12.0     5218.58/   0.0     5218.34/  12.0     5218.13/  22.0     5217.13/  28.0     5216.13/  34.0     5215.63/  44.0
   5226.78/  71.9     5229.33/  81.9     5228.98/  91.9

BASE STATION 10040+25.90  OFFSET STATION 10040+25.90      PROFILE AT DISTANCE    0.0
   5238.02/ -86.6     5235.87/ -76.6     5230.71/ -66.6     5215.63/ -44.0     5216.13/ -34.0     5217.13/ -28.0     5218.13/ -22.0
   5218.34/ -12.0     5218.58/   0.0     5218.34/  12.0     5218.13/  22.0     5217.13/  28.0     5216.13/  34.0     5215.63/  44.0
   5226.78/  71.9     5229.33/  81.9     5228.98/  91.9

BASE STATION 10040+82.00  OFFSET STATION 10040+82.00      PROFILE AT DISTANCE    0.0
   5235.40/ -84.7     5233.40/ -74.7     5228.29/ -64.7     5214.50/ -44.0     5215.00/ -34.0     5216.00/ -28.0     5217.00/ -22.0
   5217.21/ -12.0     5217.45/   0.0     5217.21/  12.0     5217.00/  22.0     5216.00/  28.0     5215.00/  34.0     5214.50/  44.0
   5223.97/  67.7     5226.87/  77.7     5227.57/  87.7
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BASE STATION 10046+00.00  OFFSET STATION 10046+00.00      PROFILE AT DISTANCE    0.0
   5215.02/ -80.6     5213.81/ -70.6     5210.74/ -60.6    5204.09/ -44.0     5204.59/ -34.0     5205.59/ -28.0     5206.59/ -22.0
   5206.79/ -12.0     5207.04/   0.0     5206.80/  12.0    5206.59/  22.0     5205.59/  28.0     5204.59/  34.0     5204.09/  44.0
   5206.18/  56.6     5207.23/  66.6     5207.03/  76.6

BASE STATION 10051+00.00  OFFSET STATION 10051+00.00      PROFILE AT DISTANCE    0.0
   5204.71/ -73.7     5203.88/ -63.7     5201.93/ -53.7    5199.52/ -44.0     5200.02/ -34.0     5201.02/ -28.0     5200.66/ -22.0
   5200.07/ -12.0     5199.35/   0.0     5198.63/  12.0    5198.03/  22.0     5196.69/  30.0     5195.69/  36.0     5195.19/  46.0
   5198.74/  60.2     5200.60/  70.2     5201.18/  80.2

BASE STATION 10056+00.00  OFFSET STATION 10056+00.00      PROFILE AT DISTANCE    0.0
   5195.87/ -67.3     5195.45/ -57.3     5194.20/ -47.3    5193.65/ -44.0     5194.15/ -34.0     5195.15/ -28.0     5194.79/ -22.0
   5194.19/ -12.0     5193.47/   0.0     5192.75/  12.0    5192.15/  22.0     5190.82/  30.0     5189.82/  36.0     5189.32/  46.0
   5192.52/  58.8     5194.38/  68.8     5194.98/  78.8

BASE STATION 10061+00.00  OFFSET STATION 10061+00.00      PROFILE AT DISTANCE    0.0
   5186.95/ -46.1     5186.60/ -44.0     5187.10/ -34.0    5188.10/ -28.0     5189.11/ -22.0     5188.71/ -12.0     5188.23/   0.0
   5187.75/  12.0     5187.35/  22.0     5186.13/  29.3    5185.13/  35.3     5184.63/  45.3     5184.84/  46.6     5186.44/  56.6
   5187.91/  66.6

BASE STATION 10066+00.00  OFFSET STATION 10066+00.00      PROFILE AT DISTANCE    0.0
   5183.56/ -42.5     5185.32/ -32.0     5185.33/ -22.0    5182.33/ -22.0     5182.73/ -12.0     5183.21/   0.0     5183.69/  12.0
   5184.09/  22.0     5187.09/  22.0     5187.07/  32.0    5181.82/  53.0

BASE STATION 10071+00.00  OFFSET STATION 10071+00.00      PROFILE AT DISTANCE    0.0
   5176.75/ -49.9     5179.74/ -32.0     5179.75/ -22.0    5176.75/ -22.0     5177.15/ -12.0     5177.63/   0.0     5178.11/  12.0
   5178.50/  22.0     5181.50/  22.0     5181.49/  32.0    5176.95/  59.2

BASE STATION 10076+00.00  OFFSET STATION 10076+00.00      PROFILE AT DISTANCE    0.0
   5170.29/ -51.2     5173.48/ -32.0     5173.50/ -22.0    5170.50/ -22.0     5170.74/ -12.0     5171.02/   0.0     5171.31/  12.0
   5171.55/  22.0     5174.55/  22.0     5174.54/  32.0    5170.69/  55.1

BASE STATION 10080+00.00  OFFSET STATION 10080+00.00      PROFILE AT DISTANCE    0.0
   5164.11/ -52.3     5167.49/ -32.0     5167.50/ -22.0    5164.50/ -22.0     5165.00/ -12.0     5165.60/   0.0     5166.20/  12.0
   5166.70/  22.0     5169.70/  22.0     5169.68/  32.0    5164.98/  60.2

BASE STATION 10080+50.00  OFFSET STATION 10080+50.00      PROFILE AT DISTANCE    0.0
   5166.74/ -32.0     5166.75/ -22.0     5163.75/ -22.0    5164.25/ -12.0     5164.85/   0.0     5165.45/  12.0     5165.94/  22.0
   5168.94/  22.0     5168.93/  32.0

BASE STATION 10080+75.00  OFFSET STATION 10080+75.00      PROFILE AT DISTANCE    0.0
   5166.36/ -32.0     5166.37/ -22.0     5163.37/ -22.0    5163.87/ -12.0     5164.46/   0.0     5165.06/  12.0     5165.56/  22.0
   5168.56/  22.0     5168.55/  32.0

BASE STATION 10081+25.00  OFFSET STATION 10081+25.00      PROFILE AT DISTANCE    0.0
   5162.27/ -51.9     5165.59/ -32.0     5165.61/ -22.0    5162.61/ -22.0     5163.11/ -12.0     5163.70/   0.0     5164.30/  12.0
   5164.80/  22.0     5167.80/  22.0     5167.79/  32.0    5164.29/  52.9

BASE STATION 10086+00.00  OFFSET STATION 10086+00.00      PROFILE AT DISTANCE    0.0
   5156.64/ -40.7     5158.09/ -32.0     5158.10/ -22.0    5155.10/ -22.0     5155.40/ -12.0     5155.75/   0.0     5156.11/  12.0
   5156.40/  22.0     5159.40/  22.0     5159.39/  32.0    5158.39/  38.0     5157.89/  48.0     5158.29/  51.1     5158.47/  54.2
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BASE STATION 10091+00.00  OFFSET STATION 10091+00.00      PROFILE AT DISTANCE    0.0
   5149.04/ -46.0   5151.38/ -32.0   5151.39/ -22.0     5148.39/ -22.0   5147.80/ -12.0   5147.08/   0.0   5146.36/  12.0
   5145.76/  22.0   5148.76/  22.0   5148.75/  32.0     5147.75/  38.0   5147.25/  48.0   5147.61/  50.2   5148.86/  60.2
   5149.28/  70.2

BASE STATION 10096+00.00  OFFSET STATION 10096+00.00      PROFILE AT DISTANCE    0.0
   5140.79/ -83.7   5140.17/ -73.7   5138.86/ -63.7     5135.58/ -44.0   5136.08/ -34.0   5137.08/ -28.0   5138.08/ -22.0
   5137.68/ -12.0   5137.21/   0.0   5136.73/  12.0     5136.33/  22.0   5135.32/  28.0   5134.32/  34.0   5133.82/  44.0
   5136.24/  58.5   5137.32/  68.5   5137.23/  78.5

BASE STATION 10101+00.00  OFFSET STATION 10101+00.00      PROFILE AT DISTANCE   -4.0
   5132.38/ -83.5   5131.31/ -73.5   5128.29/ -63.5     5122.09/ -48.0   5122.59/ -38.0   5123.59/ -32.0   5124.59/ -26.0
   5124.79/ -16.0   5125.04/  -4.0   5124.79/   8.0     5124.59/  18.0   5123.59/  24.0   5122.59/  30.0   5122.09/  40.0
   5128.49/  56.0   5131.44/  66.0   5132.31/  76.0

BASE STATION 10101+00.02  OFFSET STATION 10101+00.00      PROFILE AT DISTANCE  -22.0
   5132.38/ -83.5   5131.31/ -73.5   5128.29/ -63.5     5122.09/ -48.0   5122.59/ -38.0   5123.59/ -32.0   5124.59/ -26.0
   5124.61/ -24.8   5125.08/ -22.0   5125.28/ -12.0     5125.52/   0.0   5125.28/  12.0   5125.08/  22.0   5124.07/  28.0
   5123.07/  34.0   5122.57/  44.0   5129.70/  72.5     5131.54/  82.5   5132.08/  92.5

BASE STATION 10102+00.00  OFFSET STATION 10102+00.00      PROFILE AT DISTANCE  -22.0
   5130.71/ -91.9   5129.73/ -81.9   5126.75/ -71.9     5118.80/ -52.0   5119.30/ -42.0   5120.30/ -36.0   5121.31/ -30.0
   5121.38/ -26.4   5122.12/ -22.0   5122.32/ -12.0     5122.57/   0.0   5122.32/  12.0   5122.12/  22.0   5121.12/  28.0
   5120.12/  34.0   5119.62/  44.0   5127.27/  63.1     5130.23/  73.1   5131.10/  83.1

BASE STATION 10103+00.00  OFFSET STATION 10103+00.00      PROFILE AT DISTANCE  -12.0
   5129.69/-102.6   5128.84/ -92.6   5125.89/ -82.6     5115.25/ -56.0   5115.75/ -46.0   5116.75/ -40.0   5117.75/ -34.0
   5117.96/ -24.0   5118.20/ -12.0   5117.96/  -6.0     5119.27/  -6.0   5119.40/   0.0   5119.16/  12.0   5118.95/  22.0
   5117.95/  28.0   5116.95/  34.0   5116.45/  44.0     5126.72/  69.7   5129.71/  79.7   5130.68/  89.7

BASE STATION 10104+00.00  OFFSET STATION 10104+00.00      PROFILE AT DISTANCE  -16.0
   5127.55/-110.5   5126.76/-100.5   5123.83/ -90.5     5111.65/ -60.0   5112.15/ -50.0   5113.15/ -44.0   5114.15/ -38.0
   5114.36/ -28.0   5114.60/ -16.0   5114.36/  -8.0     5116.04/  -8.0   5116.20/   0.0   5115.96/  12.0   5115.75/  22.0
   5114.75/  28.0   5113.75/  34.0   5113.25/  44.0     5125.69/  75.1   5128.63/  85.1   5129.44/  95.1

BASE STATION 10105+00.00  OFFSET STATION 10105+00.00      PROFILE AT DISTANCE  -20.0
   5124.81/-116.7   5124.05/-106.7   5121.13/ -96.7     5108.05/ -64.0   5108.55/ -54.0   5109.55/ -48.0   5110.55/ -42.0
   5110.75/ -32.0   5111.00/ -20.0   5110.75/ -10.0     5112.79/ -10.0   5113.00/   0.0   5112.75/  12.0   5112.55/  22.0
   5111.55/  28.0   5110.55/  34.0   5110.05/  44.0     5122.97/  76.3   5125.88/  86.3   5126.63/  96.3

BASE STATION 10106+00.00  OFFSET STATION 10106+00.00      PROFILE AT DISTANCE  -24.0
   5124.57/ -88.2   5122.08/ -82.8   5114.15/ -77.5     5114.45/ -73.0   5104.45/ -68.0   5104.95/ -58.0   5105.95/ -52.0
   5106.95/ -46.0   5107.16/ -36.0   5107.40/ -24.0     5107.16/ -12.0   5106.95/ -12.0   5109.55/ -12.0   5109.55/ -12.0
   5109.80/   0.0   5109.55/  12.0   5109.35/  22.0     5108.35/  28.0   5107.35/  34.0   5106.85/  44.0   5121.43/  80.5
   5124.30/  90.5   5124.90/ 100.5

BASE STATION 10107+00.00  OFFSET STATION 10107+00.00      PROFILE AT DISTANCE  -28.0
   5122.55/ -93.7   5119.64/ -87.6   5110.55/ -81.5     5110.85/ -77.0   5100.85/ -72.0   5101.35/ -62.0   5102.35/ -56.0
   5103.35/ -50.0   5103.55/ -40.0   5103.80/ -28.0     5103.55/ -16.0   5103.35/ -14.0   5106.31/ -14.0   5106.36/ -12.0
   5106.60/   0.0   5106.36/  12.0   5106.15/  22.0     5105.15/  28.0   5104.15/  34.0   5103.65/  44.0   5113.65/  49.0
   5113.35/  53.5   5121.72/  59.1   5124.47/  64.7
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BASE STATION 10108+00.00  OFFSET STATION 10108+00.00      PROFILE AT DISTANCE  -32.0
   5121.54/ -99.9      5117.80/ -92.7      5106.95/ -85.5     5107.25/ -81.0      5097.25/ -76.0      5097.75/ -66.0      5098.75/ -60.0
   5099.75/ -54.0      5099.96/ -44.0      5100.20/ -32.0     5099.96/ -20.0      5099.75/ -16.0      5103.07/ -16.0      5103.16/ -12.0
   5103.40/   0.0      5103.16/  12.0      5102.95/  22.0     5101.95/  28.0      5100.95/  34.0      5100.45/  44.0      5110.45/  49.0
   5110.15/  53.5      5119.18/  59.5      5122.21/  65.5

BASE STATION 10109+13.20  OFFSET STATION 10109+13.20      PROFILE AT DISTANCE  -36.5
   5120.27/-107.2      5118.30/-103.3      5112.57/ -99.5     5112.87/ -95.0      5102.87/ -90.0      5103.17/ -85.5      5093.17/ -80.5
   5093.67/ -70.5      5094.67/ -64.5      5095.68/ -58.5     5095.88/ -48.5      5096.12/ -36.5      5095.88/ -24.5      5095.68/ -18.3
   5099.40/ -18.3      5099.53/ -12.0      5099.77/   0.0     5099.53/  12.0      5099.33/  22.0      5098.32/  28.0      5097.32/  34.0
   5096.82/  44.0      5106.82/  49.0      5106.52/  53.5     5116.52/  58.5      5116.22/  63.0      5120.22/  65.7      5121.55/  68.3

BASE STATION 10110+00.00  OFFSET STATION 10110+00.00      PROFILE AT DISTANCE  -40.0
   5120.29/-113.5      5117.41/-108.3      5109.45/-103.0     5109.75/ -98.5      5099.75/ -93.5      5100.05/ -89.0      5090.05/ -84.0
   5090.55/ -74.0      5091.55/ -68.0      5092.55/ -62.0     5092.75/ -52.0      5093.00/ -40.0      5092.75/ -28.0      5092.55/ -18.0
   5091.55/ -14.0      5096.12/ -14.0      5096.79/ -10.0     5097.00/   0.0      5096.75/  12.0      5096.52/  24.0      5096.33/  34.0
   5095.33/  40.0      5094.33/  46.0      5093.83/  56.0     5103.83/  61.0      5103.53/  65.5      5113.53/  70.5      5113.23/  75.0
   5119.20/  79.0      5121.29/  82.9

BASE STATION 10111+00.00  OFFSET STATION 10111+00.00      PROFILE AT DISTANCE  -40.0
   5119.07/-132.8      5116.06/-127.0      5107.43/-121.3     5107.73/-116.8      5097.73/-111.8      5098.03/-107.3      5088.03/-102.3
   5088.53/ -92.3      5089.53/ -86.3      5089.59/ -76.4     5089.59/ -74.0      5089.39/ -64.0      5089.16/ -52.0      5089.40/ -40.0
   5089.20/ -30.0      5089.20/ -27.6      5089.13/ -17.7     5092.59/ -16.0      5093.59/ -10.0      5093.80/   0.0      5093.55/  12.0
   5093.79/  24.0      5093.99/  34.0      5092.99/  40.0     5091.99/  46.0      5091.49/  56.0      5101.49/  61.0      5101.19/  65.5
   5111.19/  70.5      5110.89/  75.0      5117.09/  79.1     5119.21/  83.3

BASE STATION 10112+00.00  OFFSET STATION 10112+00.00      PROFILE AT DISTANCE  -40.0
   5117.97/-135.1      5114.33/-128.1      5103.77/-121.1     5104.07/-116.6      5094.07/-111.6      5094.38/-107.1      5084.38/-102.1
   5084.88/ -92.1      5085.88/ -86.1      5085.99/ -76.3     5085.99/ -74.0      5085.79/ -64.0      5085.55/ -52.0      5085.80/ -40.0
   5085.59/ -30.0      5085.59/ -27.7      5085.48/ -17.9     5089.39/ -16.0      5090.39/ -10.0      5090.60/   0.0      5090.36/  12.0
   5090.59/  24.0      5090.79/  34.0      5089.79/  40.0     5088.79/  46.0      5088.29/  56.0      5098.29/  61.0      5097.99/  65.5
   5107.99/  70.5      5107.69/  75.0      5113.41/  78.8     5115.25/  82.7

BASE STATION 10113+00.00  OFFSET STATION 10113+00.00      PROFILE AT DISTANCE  -40.0
   5113.81/-134.7      5110.43/-127.8      5100.13/-120.9     5100.43/-116.4      5090.43/-111.4      5090.73/-106.9      5080.73/-101.9
   5081.23/ -91.9      5082.23/ -85.9      5082.39/ -76.3     5082.39/ -74.0      5082.20/ -64.0      5081.96/ -52.0      5082.20/ -40.0
   5082.00/ -30.0      5081.99/ -27.7      5081.83/ -18.1     5086.19/ -16.0      5087.20/ -10.0      5087.40/   0.0      5087.16/  12.0
   5087.39/  24.0      5087.59/  34.0      5086.59/  40.0     5085.59/  46.0      5085.09/  56.0      5095.09/  61.0      5094.79/  65.5
   5104.79/  70.5      5104.49/  75.0      5112.28/  80.3     5114.67/  85.5

BASE STATION 10114+00.00  OFFSET STATION 10114+00.00      PROFILE AT DISTANCE  -40.0
   5113.43/-137.4      5111.62/-133.8      5106.18/-130.2     5106.48/-125.7      5096.48/-120.7      5096.78/-116.2      5086.78/-111.2
   5087.08/-106.7      5077.08/-101.7      5077.58/ -91.7     5078.58/ -85.7      5078.79/ -76.2      5078.79/ -74.0      5078.59/ -64.0
   5078.36/ -52.0      5078.60/ -40.0      5078.39/ -30.0     5078.39/ -27.8      5078.18/ -18.3      5082.99/ -16.0      5084.00/ -10.0
   5084.20/   0.0      5083.96/  12.0      5084.20/  24.0     5084.39/  34.0      5083.39/  40.0      5082.39/  46.0      5081.89/  56.0
   5091.89/  61.0      5091.59/  65.5      5101.59/  70.5     5101.29/  75.0      5104.72/  77.7      5104.04/  80.5

BASE STATION 10115+00.00  OFFSET STATION 10115+00.00      PROFILE AT DISTANCE  -40.0
   5110.72/-138.1      5108.64/-134.0      5102.52/-130.0     5102.82/-125.5      5092.82/-120.5      5093.13/-116.0      5083.13/-111.0
   5083.43/-106.5      5073.43/-101.5      5073.93/ -91.5     5074.93/ -85.5      5075.18/ -76.1      5075.19/ -74.0      5074.99/ -64.0
   5074.75/ -52.0      5075.00/ -40.0      5074.79/ -30.0     5074.79/ -27.9      5074.53/ -18.5      5079.79/ -16.0      5080.79/ -10.0
   5081.00/   0.0      5080.75/  12.0      5080.99/  24.0     5081.19/  34.0      5080.19/  40.0      5079.19/  46.0      5078.69/  56.0
   5088.69/  61.0      5088.39/  65.5      5096.98/  72.0     5096.62/  78.6
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BASE STATION 10116+00.00  OFFSET STATION 10116+00.00      PROFILE AT DISTANCE  -40.0
   5109.50/-140.2     5106.76/-135.0     5098.88/-129.8     5099.18/-125.3     5089.18/-120.3     5089.48/-115.8     5079.48/-110.8
   5079.78/-106.3     5069.78/-101.3     5070.28/ -91.3     5071.28/ -85.3     5071.59/ -76.0     5071.59/ -74.0     5071.39/ -64.0
   5071.16/ -52.0     5071.40/ -40.0     5071.20/ -30.0     5071.19/ -28.0     5070.88/ -18.7     5076.59/ -16.0     5077.59/ -10.0
   5077.80/   0.0     5077.55/  12.0     5077.79/  24.0     5077.99/  34.0     5076.99/  40.0     5075.99/  46.0     5075.49/  56.0
   5085.49/  61.0     5085.19/  65.5     5091.82/  70.1     5093.18/  74.8

BASE STATION 10117+00.00  OFFSET STATION 10117+00.00      PROFILE AT DISTANCE  -40.0
   5112.35/-146.0     5110.25/-142.5     5104.93/-139.1     5105.23/-134.6     5095.23/-129.6     5095.54/-125.1     5085.54/-120.1
   5085.84/-115.6     5075.84/-110.6     5076.14/-106.1     5066.14/-101.1     5066.64/ -91.1     5067.64/ -85.1     5067.98/ -75.9
   5067.99/ -74.0     5067.79/ -64.0     5067.55/ -52.0     5067.80/ -40.0     5067.59/ -30.0     5067.59/ -28.1     5067.24/ -18.9
   5073.39/ -16.0     5074.39/ -10.0     5074.60/   0.0     5074.36/  12.0     5074.59/  24.0     5074.79/  34.0     5073.79/  40.0
   5072.79/  46.0     5072.29/  56.0     5079.52/  74.1     5083.02/  84.1     5085.50/  94.1

BASE STATION 10118+00.00  OFFSET STATION 10118+00.00      PROFILE AT DISTANCE  -40.0
   5071.94/-115.1     5072.55/-105.8     5062.55/-100.8     5063.05/ -90.8     5064.05/ -84.8     5064.45/ -75.9     5064.46/ -74.0
   5064.26/ -64.0     5064.02/ -52.0     5064.26/ -40.0     5064.06/ -30.0     5064.05/ -28.1     5063.66/ -19.2     5070.23/ -16.0
   5071.24/ -10.0     5071.44/   0.0     5071.20/  12.0     5071.44/  24.0     5071.64/  34.0     5070.63/  40.0     5069.63/  46.0
   5069.13/  56.0     5075.46/  71.8     5079.00/  81.8     5081.61/  91.8

BASE STATION 10119+00.00  OFFSET STATION 10119+00.00      PROFILE AT DISTANCE  -40.0
   5090.00/-130.6     5086.84/-125.1     5078.52/-119.6     5078.82/-115.1     5068.82/-110.1     5069.12/-105.6     5059.12/-100.6
   5059.62/ -90.6     5060.62/ -84.6     5061.05/ -75.8     5061.06/ -74.0     5060.86/ -64.0     5060.62/ -52.0     5060.86/ -40.0
   5060.66/ -30.0     5060.65/ -28.2     5060.22/ -19.4     5067.16/ -16.0     5068.16/ -10.0     5068.37/   0.0     5068.13/  12.0
   5068.36/  24.0     5068.56/  34.0     5067.56/  40.0     5066.56/  46.0     5066.06/  56.0     5080.61/  92.4     5083.54/ 102.4
   5084.30/ 112.4

BASE STATION 10119+67.00  OFFSET STATION 10119+67.00      PROFILE AT DISTANCE  -40.0
   5081.30/-124.6     5080.08/-122.1     5076.28/-119.5     5076.58/-115.0     5066.58/-110.0     5066.88/-105.5     5056.88/-100.5
   5057.38/ -90.5     5058.38/ -84.5     5058.84/ -75.7     5058.85/ -74.0     5058.65/ -64.0     5058.41/ -52.0     5058.66/ -40.0
   5058.45/ -30.0     5058.44/ -28.3     5057.98/ -19.5     5065.16/ -16.0     5066.16/ -10.0     5066.37/   0.0     5066.13/  12.0
   5066.36/  24.0     5066.56/  34.0     5065.56/  40.0     5064.56/  46.0     5064.06/  56.0     5075.65/  85.0     5078.19/  95.0
   5077.83/ 105.0

BASE STATION 10120+75.00  OFFSET STATION 10120+75.00      PROFILE AT DISTANCE  -40.0
   5081.48/-127.9     5079.32/-123.6     5072.82/-119.3     5073.12/-114.8     5063.12/-109.8     5063.42/-105.3     5053.42/-100.3
   5053.92/ -90.3     5054.92/ -84.3     5055.42/ -75.6     5055.43/ -74.0     5055.23/ -64.0     5054.99/ -52.0     5055.23/ -40.0
   5055.03/ -30.0     5055.02/ -28.4     5054.52/ -19.7     5062.01/ -16.0     5063.01/ -10.0     5063.21/   0.0     5062.97/  12.0
   5063.21/  24.0     5063.41/  34.0     5062.41/  40.0     5061.41/  46.0     5060.91/  56.0     5063.35/  70.7     5064.87/  80.7
   5066.11/  90.7

BASE STATION 10122+00.00  OFFSET STATION 10122+00.00      PROFILE AT DISTANCE  -40.0
   5081.75/-155.4     5078.67/-145.4     5073.20/-135.4     5049.60/-100.0     5050.10/ -90.0     5051.10/ -84.0     5051.64/ -75.5
   5051.66/ -74.0     5051.46/ -64.0     5051.22/ -52.0     5051.46/ -40.0     5051.26/ -30.0     5051.25/ -28.5     5050.70/ -20.0
   5058.48/ -16.0     5059.49/ -10.0     5059.69/   0.0     5059.45/  12.0     5059.69/  24.0     5059.89/  34.0     5058.88/  40.0
   5054.50/  66.3

BASE STATION 10123+00.00  OFFSET STATION 10123+00.00      PROFILE AT DISTANCE  -40.0
   5059.81/-141.0     5058.33/-131.0     5055.18/-121.0     5046.70/ -99.8     5047.20/ -89.8     5048.20/ -83.8     5048.78/ -75.5
   5048.79/ -74.0     5048.59/ -64.0     5048.35/ -52.0     5048.59/ -40.0     5048.39/ -30.0     5048.38/ -28.5     5047.80/ -20.2
   5055.77/ -16.0     5056.77/ -10.0     5056.98/   0.0     5056.73/  12.0     5056.97/  24.0     5057.17/  34.0     5056.17/  40.0
   5041.48/  84.0
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IDENT30291       SAMPLE OUTPUT                                                       DATE 03/26/69  PAGE   13
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BASE STATION 10123+74.00  OFFSET STATION 10123+74.00      PROFILE AT DISTANCE  -40.0
   5051.25/-134.9     5050.38/-124.9     5048.43/-114.9     5044.63/ -99.7     5045.13/ -89.7     5046.13/ -83.7     5046.74/ -75.4
   5046.75/ -74.0     5046.55/ -64.0     5046.32/ -52.0     5046.56/ -40.0     5046.36/ -30.0     5046.34/ -28.6     5045.73/ -20.3
   5053.81/ -16.0     5054.82/ -10.0     5055.02/   0.0     5054.78/  12.0     5055.02/  24.0     5055.21/  34.0     5054.21/  40.0
   5040.60/  80.8

BASE STATION 10125+00.00  OFFSET STATION 10125+00.00      PROFILE AT DISTANCE  -40.0
   5039.76/-101.6     5042.79/ -83.4     5043.45/ -75.3     5043.46/ -74.0     5043.26/ -64.0     5043.02/ -52.0     5043.26/ -40.0
   5043.06/ -30.0     5043.05/ -28.7     5042.39/ -20.6     5050.60/ -16.0     5051.60/ -10.0     5051.80/   0.0     5051.56/  12.0
   5051.80/  24.0     5052.00/  34.0     5051.00/  40.0     5033.43/  93.7

BASE STATION 10125+83.00  OFFSET STATION 10125+83.00      PROFILE AT DISTANCE  -40.0
   5034.42/-108.4     5040.72/ -83.2     5041.39/ -75.2     5041.41/ -74.0     5041.21/ -64.0     5040.97/ -52.0     5041.21/ -40.0
   5041.01/ -30.0     5041.00/ -28.8     5040.32/ -20.8     5048.56/ -16.0     5049.56/ -10.0     5049.77/   0.0     5049.52/  12.0
   5049.76/  24.0     5049.96/  34.0     5048.96/  40.0     5040.13/  75.3

BASE STATION 10127+00.00  OFFSET STATION 10127+00.00      PROFILE AT DISTANCE  -40.0
   5038.47/-120.6     5038.02/-110.6     5036.76/-100.6     5036.50/ -99.0     5037.00/ -89.0     5038.00/ -83.0     5038.71/ -75.1
   5038.72/ -74.0     5038.52/ -64.0     5038.29/ -52.0     5038.53/ -40.0     5038.32/ -30.0     5038.31/ -28.9     5037.60/ -21.0
   5045.82/ -16.0     5046.82/ -10.0     5047.02/   0.0     5046.78/  12.0     5047.02/  24.0     5047.22/  34.0     5046.21/  40.0
   5038.37/  71.4

BASE STATION 10128+00.00  OFFSET STATION 10128+00.00      PROFILE AT DISTANCE  -40.0
   5037.32/-124.9     5036.70/-114.9     5035.38/-104.9     5034.36/ -98.8     5034.86/ -88.8     5035.86/ -82.8     5036.60/ -75.1
   5036.61/ -74.0     5036.41/ -64.0     5036.18/ -52.0     5036.42/ -40.0     5036.21/ -30.0     5036.20/ -28.9     5035.46/ -21.2
   5043.60/ -16.0     5044.60/ -10.0     5044.80/   0.0     5044.56/  12.0     5044.80/  24.0     5045.00/  34.0     5044.00/  40.0
   5037.13/  67.5

BASE STATION 10129+00.00  OFFSET STATION 10129+00.00      PROFILE AT DISTANCE  -40.0
   5035.55/-125.3     5034.86/-115.3     5033.52/-105.3     5032.40/ -98.6     5032.90/ -88.6     5033.90/ -82.6     5034.67/ -75.0
   5034.68/ -74.0     5034.48/ -64.0     5034.24/ -52.0     5034.48/ -40.0     5034.28/ -30.0     5034.27/ -29.0     5033.50/ -21.4
   5041.50/ -16.0     5042.50/ -10.0     5042.71/   0.0     5042.46/  12.0     5042.70/  24.0     5042.90/  34.0     5041.90/  40.0
   5035.17/  60.2

BASE STATION 10130+00.00  OFFSET STATION 10130+00.00      PROFILE AT DISTANCE  -40.0
   5033.45/-125.1     5032.99/-115.1     5031.73/-105.1     5030.61/ -98.4     5031.11/ -88.4     5032.11/ -82.4     5032.91/ -74.9
   5032.92/ -74.0     5032.72/ -64.0     5032.48/ -52.0     5032.73/ -40.0     5032.52/ -30.0     5032.51/ -29.1     5031.71/ -21.6
   5039.51/ -16.0     5040.51/ -10.0     5040.71/   0.0     5040.47/  12.0     5040.71/  24.0     5040.91/  34.0     5039.91/  40.0
   5032.55/  69.4

BASE STATION 10130+67.00  OFFSET STATION 10130+67.00      PROFILE AT DISTANCE  -40.0
   5032.45/-125.1     5031.94/-115.1     5030.66/-105.1     5029.52/ -98.2     5030.02/ -88.2     5031.02/ -82.2     5031.83/ -74.9
   5031.84/ -74.0     5031.64/ -64.0     5031.40/ -52.0     5031.64/ -40.0     5031.44/ -30.0     5031.43/ -29.1     5030.62/ -21.8
   5038.24/ -16.0     5039.24/ -10.0     5039.45/   0.0     5039.20/  12.0     5039.44/  24.0     5039.64/  34.0     5038.64/  40.0
   5032.17/  65.9

BASE STATION 10132+00.00  OFFSET STATION 10132+00.00      PROFILE AT DISTANCE  -40.0
   5031.18/-128.6     5030.64/-118.6     5029.36/-108.6     5027.57/ -98.0     5028.07/ -88.0     5029.07/ -82.0     5029.92/ -74.8
   5029.93/ -74.0     5029.73/ -64.0     5029.49/ -52.0     5029.73/ -40.0     5029.53/ -30.0     5029.52/ -29.2     5028.68/ -22.0
   5035.88/ -16.0     5036.88/ -10.0     5037.09/   0.0     5036.84/  12.0     5037.08/  24.0     5037.28/  34.0     5036.28/  40.0
   5033.17/  58.6
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BASE STATION 10132+75.00  OFFSET STATION 10132+75.00      PROFILE AT DISTANCE  -40.0
   5030.06/-127.6     5029.49/-117.6     5028.20/-107.6     5026.56/ -97.8     5027.06/ -87.8     5028.06/ -81.8     5028.92/ -74.7
   5028.93/ -74.0     5028.73/ -64.0     5028.50/ -52.0     5028.74/ -40.0     5028.54/ -30.0     5028.52/ -29.3     5027.66/ -22.2
   5034.60/ -16.0     5035.61/ -10.0     5035.81/   0.0     5035.57/  12.0     5035.80/  24.0     5036.00/  34.0     5035.00/  40.0
   5034.00/  46.0     5033.50/  56.0     5033.88/  59.2     5033.98/  62.3

BASE STATION 10133+99.70  OFFSET STATION 10133+99.70      PROFILE AT DISTANCE  -40.0
   5026.84/-122.6     5026.84/-112.6     5025.73/-102.6     5024.88/ -97.5     5025.38/ -87.5     5026.38/ -81.5     5027.27/ -74.6
   5027.29/ -74.0     5027.09/ -64.0     5026.85/ -52.0     5027.09/ -40.0     5026.89/ -30.0     5026.88/ -29.4     5025.98/ -22.5
   5032.48/ -16.0     5033.48/ -10.0     5033.69/   0.0     5033.45/  12.0     5033.68/  24.0     5033.88/  34.0     5032.88/  40.0
   5031.88/  46.0     5031.38/  56.0     5031.68/  58.7     5031.70/  61.3

BASE STATION 20132+55.40  OFFSET STATION 20132+55.40      PROFILE AT DISTANCE  -40.0
   5026.84/-122.6     5026.84/-112.6     5025.73/-102.6     5024.88/ -97.5     5025.38/ -87.5     5026.38/ -81.5     5027.27/ -74.6
   5027.29/ -74.0     5027.09/ -64.0     5026.85/ -52.0     5027.09/ -40.0     5026.89/ -30.0     5026.88/ -29.4     5025.98/ -22.5
   5032.48/ -16.0     5033.48/ -10.0     5033.69/   0.0     5033.45/  12.0     5033.68/  24.0     5033.88/  34.0     5032.88/  40.0
   5031.88/  46.0     5031.38/  56.0     5031.68/  58.7     5031.70/  61.3

BASE STATION 20132+65.00  OFFSET STATION 20132+65.00      PROFILE AT DISTANCE  -40.0
   5027.56/-124.3     5027.14/-114.3     5025.89/-104.3     5024.75/ -97.5     5025.25/ -87.5     5026.25/ -81.5     5027.14/ -74.6
   5027.16/ -74.0     5026.96/ -64.0     5026.72/ -52.0     5026.96/ -40.0     5026.76/ -30.0     5026.75/ -29.4     5025.86/ -22.5
   5032.32/ -16.0     5033.32/ -10.0     5033.52/   0.0     5033.28/  12.0     5033.52/  24.0     5033.72/  34.0     5032.71/  40.0
   5031.71/  46.0     5031.21/  56.0     5031.50/  59.0     5031.38/  62.0

BASE STATION 20134+00.00  OFFSET STATION 20134+00.00      PROFILE AT DISTANCE  -40.0
   5030.82/-137.9     5030.04/-127.9     5028.11/-117.9     5022.95/ -97.2     5023.45/ -87.2     5024.45/ -81.2     5025.36/ -74.5
   5025.37/ -74.0     5025.17/ -64.0     5024.93/ -52.0     5025.18/ -40.0     5024.97/ -30.0     5024.96/ -29.5     5024.05/ -22.8
   5030.02/ -16.0     5031.02/ -10.0     5031.23/   0.0     5030.98/  12.0     5031.22/  24.0     5031.42/  34.0     5030.42/  40.0
   5029.42/  46.0     5028.92/  56.0     5029.32/  59.1     5029.51/  62.2

BASE STATION 20135+00.00  OFFSET STATION 20135+00.00      PROFILE AT DISTANCE  -40.0
   5026.32/-136.6     5026.05/-126.6     5024.86/-116.6     5021.61/ -97.0     5022.11/ -87.0     5023.11/ -81.0     5024.04/ -74.4
   5024.05/ -74.0     5023.85/ -64.0     5023.61/ -52.0     5023.85/ -40.0     5023.65/ -30.0     5023.64/ -29.6     5022.71/ -23.0
   5028.32/ -16.0     5029.32/ -10.0     5029.52/   0.0     5029.28/  12.0     5029.52/  24.0     5029.72/  34.0     5028.71/  40.0
   5027.71/  46.0     5027.21/  56.0     5029.14/  67.6

BASE STATION 20136+00.00  OFFSET STATION 20136+00.00      PROFILE AT DISTANCE  -40.0
   5025.71/-129.8     5025.30/-119.8     5023.49/-109.8     5020.26/ -96.8     5020.76/ -86.8     5021.76/ -80.8     5022.71/ -74.3
   5022.72/ -74.0     5022.52/ -64.0     5022.29/ -52.0     5022.53/ -40.0     5022.32/ -30.0     5022.32/ -29.7     5021.36/ -23.2
   5026.61/ -16.0     5027.62/ -10.0     5027.82/   0.0     5027.58/  12.0     5027.82/  24.0     5028.02/  34.0     5027.01/  40.0
   5026.01/  46.0     5025.51/  56.0     5027.16/  62.6

BASE STATION 20137+00.00  OFFSET STATION 20137+00.00      PROFILE AT DISTANCE  -40.0
   5024.11/-127.8     5023.57/-117.8     5021.73/-107.8     5018.93/ -96.6     5019.43/ -86.6     5020.43/ -80.6     5021.39/ -74.2
   5021.40/ -74.0     5021.20/ -64.0     5020.96/ -52.0     5021.20/ -40.0     5021.00/ -30.0     5020.99/ -29.8     5020.03/ -23.4
   5024.91/ -16.0     5025.92/ -10.0     5026.12/   0.0     5025.88/  12.0     5026.12/  24.0     5026.32/  34.0     5025.31/  40.0
   5024.31/  46.0     5023.81/  56.0     5032.72/  78.3     5035.66/  88.3     5036.48/  98.3

BASE STATION 20138+00.00  OFFSET STATION 20138+00.00      PROFILE AT DISTANCE  -40.0
   5021.82/-132.7     5021.52/-122.7     5020.31/-112.7     5017.59/ -96.4     5018.09/ -86.4     5019.09/ -80.4     5020.07/ -74.2
   5020.07/ -74.0     5019.88/ -64.0     5019.64/ -52.0     5019.88/ -40.0     5019.68/ -30.0     5019.67/ -29.8     5018.69/ -23.6
   5023.21/ -16.0     5024.21/ -10.0     5024.42/   0.0     5024.18/  12.0     5024.41/  24.0     5024.61/  34.0     5023.61/  40.0
   5022.61/  46.0     5022.11/  56.0     5027.57/  77.9     5028.45/  87.9     5026.07/  97.9
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IDENT30291        SAMPLE OUTPUT                                                           DATE 03/26/69  PAGE   15
                   TEMPLATE LISTING FOR TEMPLATE A

BASE STATION 20139+00.00  OFFSET STATION 20139+00.00      PROFILE AT DISTANCE  -40.0
   5019.99/-129.8     5019.72/-119.8     5018.52/-109.8     5016.26/ -96.2     5016.76/ -86.2     5017.76/ -80.2     5018.75/ -74.1
   5018.75/ -74.0     5018.55/ -64.0     5018.32/ -52.0     5018.56/ -40.0     5018.36/ -30.0     5018.35/ -29.9     5017.36/ -23.8
   5021.51/ -16.0     5022.51/ -10.0     5022.71/   0.0     5022.47/  12.0     5022.71/  24.0     5022.91/  34.0     5021.91/  40.0
   5020.91/  46.0     5020.41/  56.0     5026.48/  56.0

BASE STATION 20140+00.00  OFFSET STATION 20140+00.00      PROFILE AT DISTANCE  -40.0
   5019.16/-130.7     5018.65/-120.7     5017.37/-110.7     5014.93/ -96.0     5015.43/ -86.0     5016.43/ -80.0     5017.43/ -74.0
   5017.43/ -74.0     5017.23/ -64.0     5016.99/ -52.0     5017.23/ -40.0     5017.03/ -30.0     5017.03/ -30.0     5016.03/ -24.0
   5019.81/ -16.0     5020.81/ -10.0     5021.02/   0.0     5020.77/  12.0     5021.01/  24.0     5021.21/  34.0     5020.21/  40.0
   5019.21/  46.0     5018.71/  56.0     5028.67/  56.0

BASE STATION 20141+00.00  OFFSET STATION 20141+00.00      PROFILE AT DISTANCE  -40.0
   5016.50/-124.6     5016.23/-114.6     5015.03/-104.6     5013.60/ -96.0     5014.10/ -86.0     5015.10/ -80.0     5016.11/ -74.0
   5016.11/ -74.0     5015.91/ -64.0     5015.67/ -52.0     5015.91/ -40.0     5015.71/ -30.0     5015.71/ -30.0     5014.70/ -24.0
   5018.11/ -16.0     5019.11/ -10.0     5019.31/   0.0     5019.07/  12.0     5019.31/  24.0     5019.51/  34.0     5018.50/  40.0
   5017.50/  46.0     5017.00/  56.0     5209.11/ 344.2     5215.65/ 354.2     5221.95/ 364.2

BASE STATION 20141+33.00  OFFSET STATION 20141+33.00      PROFILE AT DISTANCE  -40.0
   5016.34/-126.7     5016.13/-116.7     5014.95/-106.7     5013.16/ -96.0     5013.66/ -86.0     5014.66/ -80.0     5015.67/ -74.0
   5015.67/ -74.0     5015.47/ -64.0     5015.23/ -52.0     5015.47/ -40.0     5015.27/ -30.0     5015.27/ -30.0     5014.27/ -24.0
   5017.54/ -16.0     5018.55/ -10.0     5018.75/   0.0     5018.51/  12.0     5018.75/  24.0     5018.95/  34.0     5017.94/  40.0
   5016.94/  46.0     5016.44/  56.0     5066.01/ 130.4     5072.28/ 140.4     5077.74/ 150.4

BASE STATION 20143+00.00  OFFSET STATION 20143+00.00      PROFILE AT DISTANCE  -40.0
   5012.92/-119.8     5012.75/-109.8     5011.59/ -99.8     5010.95/ -96.0     5011.45/ -86.0     5012.45/ -80.0     5013.46/ -74.0
   5013.46/ -74.0     5013.26/ -64.0     5013.02/ -52.0     5013.26/ -40.0     5013.06/ -30.0     5013.06/ -30.0     5012.05/ -24.0
   5014.70/ -16.0     5015.71/ -10.0     5015.91/   0.0     5015.67/  12.0     5015.91/  24.0     5016.11/  34.0     5015.10/  40.0
   5014.10/  46.0     5013.60/  56.0     5076.93/ 151.0     5083.29/ 161.0     5089.05/ 171.0

BASE STATION 20144+00.00  OFFSET STATION 20144+00.00      PROFILE AT DISTANCE  -40.0
   5011.88/-121.0     5011.64/-111.0     5010.46/-101.0     5009.63/ -96.0     5010.13/ -86.0     5011.13/ -80.0     5012.13/ -74.0
   5012.13/ -74.0     5011.93/ -64.0     5011.70/ -52.0     5011.94/ -40.0     5011.73/ -30.0     5011.73/ -30.0     5010.73/ -24.0
   5013.00/ -16.0     5014.00/ -10.0     5014.21/   0.0     5013.96/  12.0     5014.20/  24.0     5014.40/  34.0     5013.40/  40.0
   5012.40/  46.0     5011.90/  56.0     5018.23/  65.5     5024.19/  75.5     5028.73/  85.5

BASE STATION 20145+00.00  OFFSET STATION 20145+00.00      PROFILE AT DISTANCE  -40.0
   5010.18/-119.6     5010.05/-109.6     5008.89/ -99.6     5008.30/ -96.0     5008.80/ -86.0     5009.80/ -80.0     5010.81/ -74.0
   5010.81/ -74.0     5010.61/ -64.0     5010.37/ -52.0     5010.61/ -40.0     5010.41/ -30.0     5010.41/ -30.0     5009.41/ -24.0
   5011.30/ -16.0     5012.30/ -10.0     5012.50/   0.0     5012.26/  12.0     5012.50/  24.0     5012.70/  34.0     5011.70/  40.0
   5010.70/  46.0     5010.20/  56.0     5016.75/  72.4     5020.09/  82.4     5022.10/  92.4

BASE STATION 20146+00.00  OFFSET STATION 20146+00.00      PROFILE AT DISTANCE  -40.0
   5008.68/-118.6     5008.56/-108.6     5007.41/ -98.6     5006.98/ -96.0     5007.48/ -86.0     5008.48/ -80.0     5009.49/ -74.0
   5009.49/ -74.0     5009.29/ -64.0     5009.05/ -52.0     5009.29/ -40.0     5009.09/ -30.0     5009.09/ -30.0     5008.09/ -24.0
   5009.60/ -16.0     5010.60/ -10.0     5010.80/   0.0     5010.56/  12.0     5010.80/  24.0     5011.00/  34.0     5010.00/  40.0
   5009.00/  46.0     5008.50/  56.0     5011.63/  60.7     5017.14/  70.7     5020.35/  80.7

BASE STATION 20147+00.00  OFFSET STATION 20147+00.00      PROFILE AT DISTANCE  -40.0
   5006.96/-115.9     5006.81/-105.9     5005.66/ -96.0     5006.16/ -86.0     5007.16/ -80.0     5008.16/ -74.0     5008.16/ -74.0
   5007.96/ -64.0     5007.73/ -52.0     5007.97/ -40.0     5007.77/ -30.0     5007.77/ -30.0     5006.76/ -24.0     5007.89/ -16.0
   5008.90/ -10.0     5009.10/   0.0     5008.86/  12.0     5009.10/  24.0     5009.30/  34.0     5008.29/  40.0     5007.29/  46.0
   5006.79/  56.0     5010.40/  61.4     5015.91/  71.4     5019.13/  81.4
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IDENT30291      SAMPLE OUTPUT                                                       DATE 03/26/69  PAGE   16
                  TEMPLATE LISTING FOR TEMPLATE A

BASE STATION 20148+00.00  OFFSET STATION 20148+00.00     PROFILE AT DISTANCE  -40.0
   5005.78/-117.6     5005.72/-107.6     5004.59/ -97.6     5004.34/ -96.0     5004.84/ -86.0     5005.84/ -80.0     5006.84/ -74.0
   5006.84/ -74.0     5006.64/ -64.0     5006.40/ -52.0     5006.64/ -40.0     5006.44/ -30.0     5006.44/ -30.0     5005.44/ -24.0
   5006.19/ -16.0     5007.20/ -10.0     5007.40/   0.0     5007.16/  12.0     5007.39/  24.0     5007.59/  34.0     5006.59/  40.0
   5005.59/  46.0     5005.09/  56.0     5014.67/  79.9     5018.15/  89.9     5020.60/  99.9

BASE STATION 20149+00.00  OFFSET STATION 20149+00.00     PROFILE AT DISTANCE  -40.0
   5004.58/-118.2     5004.51/-108.2     5003.38/ -98.2     5003.01/ -96.0     5003.51/ -86.0     5004.51/ -80.0     5005.52/ -74.0
   5005.52/ -74.0     5005.32/ -64.0     5005.08/ -52.0     5005.32/ -40.0     5005.12/ -30.0     5005.12/ -30.0     5004.11/ -24.0
   5004.10/ -23.8     5004.49/ -16.0     5005.50/ -10.0     5005.70/   0.0     5005.46/  12.0     5005.70/  24.0     5005.89/  34.0
   5004.89/  40.0     5003.89/  46.0     5003.39/  56.0     5014.90/  84.8     5018.00/  94.8     5019.29/ 104.8

BASE STATION 20150+00.00  OFFSET STATION 20150+00.00     PROFILE AT DISTANCE  -40.0
   5004.07/-121.6     5003.81/-111.6     5002.62/-101.6     5001.69/ -96.0     5002.19/ -86.0     5003.19/ -80.0     5004.20/ -74.0
   5004.20/ -74.0     5004.00/ -64.0     5003.76/ -52.0     5004.00/ -40.0     5003.80/ -30.0     5003.80/ -30.0     5002.79/ -24.0
   5002.59/ -20.0     5002.79/ -16.0     5003.80/ -10.0     5004.00/   0.0     5003.76/  12.0     5004.00/  24.0     5004.20/  34.0
   5003.19/  40.0     5002.19/  46.0     5001.69/  56.0     5018.43/  81.1     5025.93/  96.1     5028.43/ 111.1
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IDENT30291       SAMPLE OUTPUT                                                    DATE 03/26/69  PAGE   17

  BASE STATION    OFFSET STATION       ****** LEFT *********       ******* RIGHT*********
                    TEMPLATE B          CATCH   C/F    SLOPE         SLOPE   C/F     CATCH

  10005+00.00     10005+00.00          -28.0    0.0F 1000.0          6.0    1.0C     55.7
  10005+00.02     10005+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10025+00.00     10025+00.00           14.0    1.0F    6.0          6.0    1.0F     90.0
  10025+00.02     10025+00.00            3.3    1.8F    6.0          6.0    3.5F    111.0
  10026+59.00     10026+59.00          -30.4    4.6C    4.0          4.0    3.8F    105.4
  10027+00.00     10027+00.00          -33.7    5.4C    4.0          6.0    3.5F    110.9
  10028+00.00     10028+00.00           14.0    1.0F    6.0          6.0    1.0F     90.0
  10029+00.00     10029+00.00           14.0    1.0F    6.0          6.0    1.0F     90.0
  10031+00.00     10031+00.00           -5.4    0.3C    6.1          2.5    2.0C    116.2
  10031+00.02     10031+00.00           14.0    1.0F    6.0          6.0    1.0F     90.0
  10040+00.00     10040+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10040+00.02     10040+00.00          -86.1   21.4C    1.5          2.5   14.9C     91.1
  10040+00.01     10040+00.01          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10040+16.00     10040+16.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10040+25.90     10040+25.90          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10046+00.00     10046+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10050+00.00     10050+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10056+00.00     10056+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10065+00.00     10065+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10075+00.00     10075+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10085+00.00     10085+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10090+00.00     10090+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10097+50.00     10097+50.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10099+99.99     10099+99.99          -28.0    1.0F    6.0          6.0    1.0F     28.0
  10101+00.00     10101+00.00          -35.5    0.1F   19.6          4.0    9.6C     92.5
  10101+00.02     10101+00.00          -28.0    1.0F    6.0          6.0    1.0F     28.0
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 IDENT30291       SAMPLE OUTPUT                                                      DATE 03/26/69  PAGE   18
                    TEMPLATE LISTING FOR TEMPLATE B

BASE STATION 10005+00.00  OFFSET STATION 10005+00.00      PROFILE AT DISTANCE    0.0
   5250.73/ -28.0    5250.73/ -28.0    5251.73/ -22.0    5251.93/ -12.0    5252.18/   0.0    5251.93/  12.0    5251.73/  22.0
   5250.73/  28.0    5249.73/  34.0    5249.23/  44.0    5249.92/  49.9    5250.06/  55.7

BASE STATION 10005+00.02  OFFSET STATION 10005+00.00      PROFILE AT DISTANCE    0.0
   5250.73/ -28.0    5251.73/ -22.0    5251.93/ -12.0    5252.18/   0.0    5251.93/  12.0    5251.73/  22.0    5250.73/  28.0

BASE STATION 10025+00.00  OFFSET STATION 10025+00.00      PROFILE AT DISTANCE   30.0
   5241.54/  14.0    5242.54/  20.0    5242.75/  30.0    5242.95/  40.0    5243.18/  52.0    5242.94/  64.0    5242.74/  74.0
   5242.54/  84.0    5241.53/  90.0

BASE STATION 10025+00.02  OFFSET STATION 10025+00.00      PROFILE AT DISTANCE   30.0
   5239.76/   3.3    5241.54/  14.0    5242.54/  20.0    5242.75/  30.0    5242.95/  40.0    5243.18/  52.0    5242.94/  64.0
   5242.74/  74.0    5242.54/  84.0    5241.53/  90.0    5238.04/ 111.0

BASE STATION 10026+59.00  OFFSET STATION 10026+59.00      PROFILE AT DISTANCE   30.0
   5243.75/ -30.4    5242.77/ -20.4    5240.78/ -10.4    5238.69/  -2.0    5239.19/   8.0    5240.19/  14.0    5241.19/  20.0
   5241.39/  30.0    5241.59/  40.0    5241.83/  52.0    5241.59/  64.0    5241.39/  74.0    5241.18/  84.0    5240.18/  90.0
   5236.34/ 105.4

BASE STATION 10027+00.00  OFFSET STATION 10027+00.00      PROFILE AT DISTANCE   30.0
   5244.30/ -33.7    5243.23/ -23.7    5241.20/ -13.7    5238.29/  -2.0    5238.79/   8.0    5239.79/  14.0    5240.79/  20.0
   5240.99/  30.0    5241.19/  40.0    5241.43/  52.0    5241.19/  64.0    5240.98/  74.0    5240.78/  84.0    5239.78/  90.0
   5236.30/ 110.9

BASE STATION 10028+00.00  OFFSET STATION 10028+00.00      PROFILE AT DISTANCE   30.0
   5238.72/  14.0    5239.72/  20.0    5239.93/  30.0    5240.13/  40.0    5240.36/  52.0    5240.12/  64.0    5239.92/  74.0
   5239.71/  84.0    5238.71/  90.0

BASE STATION 10029+00.00  OFFSET STATION 10029+00.00      PROFILE AT DISTANCE   30.0
   5237.53/  14.0    5238.54/  20.0    5238.74/  30.0    5238.94/  40.0    5239.18/  52.0    5238.93/  64.0    5238.73/  74.0
   5238.53/  84.0    5237.52/  90.0

BASE STATION 10031+00.00  OFFSET STATION 10031+00.00      PROFILE AT DISTANCE   30.0
   5233.64/  -5.4    5233.50/  -3.7    5233.27/  -2.0    5233.77/   8.0    5234.77/  14.0    5235.78/  20.0    5235.98/  30.0
   5236.18/  40.0    5236.42/  52.0    5236.18/  64.0    5235.97/  74.0    5235.77/  84.0    5234.77/  90.0    5233.77/  96.0
   5233.27/ 106.0    5235.04/ 111.1    5236.27/ 116.2

BASE STATION 10031+00.02  OFFSET STATION 10031+00.00      PROFILE AT DISTANCE   30.0
   5234.77/  14.0    5235.78/  20.0    5235.98/  30.0    5236.18/  40.0    5236.42/  52.0    5236.18/  64.0    5235.97/  74.0
   5235.77/  84.0    5234.77/  90.0

BASE STATION 10040+00.00  OFFSET STATION 10040+00.00      PROFILE AT DISTANCE    0.0
   5217.45/ -28.0    5218.45/ -22.0    5218.66/ -12.0    5218.90/   0.0    5218.66/  12.0    5218.45/  22.0    5217.45/  28.0

BASE STATION 10040+00.02  OFFSET STATION 10040+00.00      PROFILE AT DISTANCE    0.0
   5237.96/ -86.1    5235.82/ -76.1    5230.66/ -66.1    5215.95/ -44.0    5216.45/ -34.0    5217.45/ -28.0    5218.45/ -22.0
   5218.66/ -12.0    5218.90/   0.0    5218.66/  12.0    5218.45/  22.0    5217.45/  28.0    5216.45/  34.0    5215.95/  44.0
   5226.80/  71.1    5229.46/  81.1    5229.45/  91.1
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IDENT30291       SAMPLE OUTPUT                                                                      DATE 03/26/69  PAGE   19
                   TEMPLATE LISTING FOR TEMPLATE B

BASE STATION 10040+00.01  OFFSET STATION 10040+00.01      PROFILE AT DISTANCE    0.0
   5217.45/ -28.0     5218.45/ -22.0     5218.66/ -12.0   5218.90/   0.0    5218.66/  12.0     5218.45/  22.0     5217.45/  28.0

BASE STATION 10040+16.00  OFFSET STATION 10040+16.00      PROFILE AT DISTANCE    0.0
   5217.13/ -28.0     5218.13/ -22.0     5218.34/ -12.0   5218.58/   0.0    5218.34/  12.0     5218.13/  22.0     5217.13/  28.0

BASE STATION 10040+25.90  OFFSET STATION 10040+25.90      PROFILE AT DISTANCE    0.0
   5217.13/ -28.0     5218.13/ -22.0     5218.34/ -12.0   5218.58/   0.0    5218.34/  12.0     5218.13/  22.0     5217.13/  28.0

BASE STATION 10046+00.00  OFFSET STATION 10046+00.00      PROFILE AT DISTANCE    0.0
   5205.59/ -28.0     5206.59/ -22.0     5206.80/ -12.0   5207.04/   0.0    5206.80/  12.0     5206.59/  22.0     5205.59/  28.0

BASE STATION 10050+00.00  OFFSET STATION 10050+00.00      PROFILE AT DISTANCE    0.0
   5198.81/ -28.0     5199.82/ -22.0     5200.02/ -12.0   5200.26/   0.0    5200.02/  12.0     5199.82/  22.0     5198.81/  28.0

BASE STATION 10056+00.00  OFFSET STATION 10056+00.00      PROFILE AT DISTANCE    0.0
   5191.55/ -28.0     5192.55/ -22.0     5192.75/ -12.0   5193.00/   0.0    5192.75/  12.0     5192.55/  22.0     5191.55/  28.0

BASE STATION 10065+00.00  OFFSET STATION 10065+00.00      PROFILE AT DISTANCE    0.0
   5182.55/ -28.0     5183.55/ -22.0     5183.75/ -12.0   5184.00/   0.0    5183.75/  12.0     5183.55/  22.0     5182.55/  28.0

BASE STATION 10075+00.00  OFFSET STATION 10075+00.00      PROFILE AT DISTANCE    0.0
   5170.88/ -28.0     5171.89/ -22.0     5172.09/ -12.0   5172.33/   0.0    5172.09/  12.0     5171.89/  22.0     5170.88/  28.0

BASE STATION 10085+00.00  OFFSET STATION 10085+00.00      PROFILE AT DISTANCE    0.0
   5155.88/ -28.0     5156.89/ -22.0     5157.09/ -12.0   5157.33/   0.0    5157.09/  12.0     5156.89/  22.0     5155.88/  28.0

BASE STATION 10090+00.00  OFFSET STATION 10090+00.00      PROFILE AT DISTANCE    0.0
   5147.03/ -28.0     5148.03/ -22.0     5148.23/ -12.0   5148.48/   0.0    5148.23/  12.0     5148.03/  22.0     5147.03/  28.0

BASE STATION 10097+50.00  OFFSET STATION 10097+50.00      PROFILE AT DISTANCE    0.0
   5132.55/ -28.0     5133.55/ -22.0     5133.75/ -12.0   5134.00/   0.0    5133.75/  12.0     5133.55/  22.0     5132.55/  28.0

BASE STATION 10099+99.99  OFFSET STATION 10099+99.99      PROFILE AT DISTANCE    0.0
   5126.80/ -28.0     5127.80/ -22.0     5128.00/ -12.0   5128.25/   0.0    5128.00/  12.0     5127.80/  22.0     5126.80/  28.0

BASE STATION 10101+00.00  OFFSET STATION 10101+00.00      PROFILE AT DISTANCE    0.0
   5123.00/ -35.5     5123.07/ -34.0     5124.07/ -28.0   5125.08/ -22.0    5125.28/ -12.0     5125.52/   0.0     5125.28/  12.0
   5125.08/  22.0     5124.07/  28.0     5123.07/  34.0   5122.57/  44.0    5129.70/  72.5     5131.54/  82.5     5132.08/  92.5
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IDENT30291       SAMPLE OUTPUT                                                    DATE 03/26/69  PAGE   20
                   TEMPLATE LISTING FOR TEMPLATE B

BASE STATION 10101+00.02  OFFSET STATION 10101+00.00      PROFILE AT DISTANCE    0.0
   5124.07/ -28.0    5125.08/ -22.0    5125.28/ -12.0    5125.52/   0.0    5125.28/  12.0    5125.08/  22.0    5124.07/  28.0
```

30291 SAMPLE OUTPUT   *

```
   X-SEC     TE    OFFSET    X-S.EXT.   --------CUT--------   -------FILL--------   COMP.   ADJUST   NET   CUT       FILL      MASS
  STATION    MP    STATION     L   R    AREA  ADDED    VOL.   AREA  ADDED    VOL.   FACT.    VOL.    VOL.  ACCUM     ACCUM     ORD.

     0+00.00 A      0+00.00    0   0     285      0       0     53      0      0 0.0    F*******      0      0         0         0
                                                        0*                    0*                            0*        0*        0*

     0+99.90 A      0+99.90    0   0       0      0     527    238      0    538 1.25000F    672   -145    527       672      -145
                                                      527*                  538*                          527*      672*      -145*

     1+99.40 A      1+99.40    0   0       0      0       0    394      0   1165 1.10000F   1281  -1281    527      1953     -1426
                                                      527*                 1703*                          527*     1953*     -1426*

     2+51.90 A      2+51.90    0   0       0      0       0    659      0   1024 1.10000F   1126  -1126    527      3080     -2553
 10001+54.80 A  10001+54.80    0   0       0      0       0    659      0      0 0.0     F    1126      0    527      3080     -2553
                                                      527*                 2727*                          527*     3080*     -2553*

 10002+01.30 A  10002+01.30    0   0       0      0       0    804      0   1260 1.10000F   1386  -1385    527      4466     -3939
                                                      527*                 3987*                          527*     4466*     -3939*

 10002+84.40 A  10002+84.40    0   0       0      0       0    745      0   2384 1.10000F   2622  -2622    527      7088     -6561
                                                      527*                 6371*                          527*     7088*     -6561*

 10004+00.00 A  10004+00.00    0   0       0      0       0   1077      0   3900 1.10000F   4290  -4289    527     11378    -10851
                                                      527*                10271*                          527*    11378*    -10851*

 10005+00.00 A  10005+00.00    0   5       0      0       0   2028      0   5750 1.10000F   6325  -6324    527     17703    -17176
 10005+00.00 B  10005+00.00    0   0      17      0       0      0      0      0 1.00000F      0      0      0         0         0
                                                      527*                16021*                          527*    17703*    -17176*

 10005+00.02 A  10005+00.00    0  22       0      0       0   2187      0      0 0.0     F       0      0    527     17703    -17176
 10005+00.02 B  10005+00.00    0   0       0      0       0      0      0      0 1.00000F      0      0      0         0         0
                                                      527*                16021*                          527*    17703*    -17176*

 10006+00.00 A  10006+00.00    0   0       0      0       0   2159      0   8048 1.10000F   8853  -8852    527     26556    -26029
                                                      527*                24069*                          527*    26556*    -26029*

 10006+93.00 A  10006+93.00    0   0       0      0       0   2187      0   7485 1.10000F   8233  -8233    527     34790    -34263
                                                      527*                31554*                          527*    34790*    -34263*

 10009+00.00 A  10009+00.00    0   0     474      0    1817     43      0   8548 1.10000F   9403  -7585   2344     44192    -41848
                                                     2344*                40102*                         2344*    44192*    -41848*

 10010+00.00 A  10010+00.00    0   9     319    210    1469    152      0    361 1.25000F    451   1227   4023     44644    -40621
                                                     3813*                40463*                         4023*    44644*    -40621*

 10011+00.00 A  10011+00.00    0   0     159      0     885    180    210    615 1.25000F    769    -93   4908     45622    -40714
                                                     4698*                41078*                         4908*    45622*    -40714*

 10012+00.00 A  10012+00.00    0   1     262      0     780    189      0    683 1.25000F    854    -73   5688     46476    -40788
```

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30291 SAMPLE OUTPUT                                          *

  X-SEC     TE   OFFSET    X-S.EXT.  --------CUT--------  -------FILL-------   COMP.   ADJUST    NET   CUT     FILL     MASS
 STATION    MP   STATION     L   R   AREA  ADDED   VOL.   AREA.  ADDED   VOL.   FACT.    VOL.    VOL.  ACCUM   ACCUM    ORD.

                                                  5478*                41761*                        5688*   46476*  -40788*

10013+00.00 A 10013+00.00    0  10    336      0   1107    286      0    880 1.15000F  1012      95   6795    47488   -40693
                                                  6585*                42641*                        6795*   47488*  -40693*

10014+00.00 A 10014+00.00    0  45    315      0   1206    324      0   1130 1.10000F  1243     -36   8001    48731   -40730
                                                  7791*                43771*                        8001*   48731*  -40730*

10015+00.00 A 10015+00.00    0  20    355      0   1241    261      0   1083 1.10000F  1191      49   9242    49922   -40680
                                                  9032*                44854*                        9242*   49922*  -40680*

10016+00.00 A 10016+00.00    0   9    258      0   1135    194      0    843 1.15000F   969     165  10377    50892   -40515
                                                 10167*                45697*                       10377*   50892*  -40515*

10017+00.00 A 10017+00.00    0   0    209      0    865     79      0    506 1.25000F   632     232  11242    51524   -40282
                                                 11032*                46203*                       11242*   51524*  -40282*

10018+00.00 A 10018+00.00    0   0    173      0    707     86      0    306 1.25000F   382     324  11949    51907   -39958
                                                 11739*                46509*                       11949*   51907*  -39958*

10018+50.00 A 10018+50.00    0   0    156      0    305     85      0    158 1.25000F   197     107  12254    52104   -39850
                                                 12044*                46667*                       12254*   52104*  -39850*

10019+00.00 A 10019+00.00    0   0    118      0    254    162      0    229 1.25000F   286     -32  12508    52391   -39883
                                                 12298*                46896*                       12508*   52391*  -39883*

10020+00.00 A 10020+00.00    0   0     67      0    343    250      0    763 1.15000F   877    -534  12851    53268   -40417
                                                 12641*                47659*                       12851*   53268*  -40417*

10021+50.00 A 10021+50.00    0   0     10      0    214    439      0   1914 1.10000F  2105   -1891  13065    55373   -42308
                                                 12855*                49573*                       13065*   55373*  -42308*

10022+34.00 A 10022+34.00    0   0     36      0     72    620      0   1647 1.10000F  1812   -1739  13137    57185   -44048
                                                 12927*                51220*                       13137*   57185*  -44048*

10023+00.00 A 10023+00.00    0   0    122      0    193    546      0   1425 1.10000F  1567   -1374  13330    58753   -45423
                                                 13120*                52645*                       13330*   58753*  -45423*

10024+00.00 A 10024+00.00    0  11    123      0    454    602      0   2126 1.10000F  2339   -1884  13784    61091   -47307
                                                 13574*                54771*                       13784*   61091*  -47307*

10025+00.00 A 10025+00.00    0  16    186      0    572    559      0   2150 1.10000F  2365   -1792  14356    63456   -49100
10025+00.00 B 10025+00.00    0   0      0      0      0      0      0      0 1.00000F     0       0      0        0        0
                                                 14146*                56921*                       14356*   63456*  -49100*

10025+00.02 A 10025+00.00    0   0    186      0      0     73      0      0 0.0     F     0       0  14356    63456   -49100
10025+00.02 B 10025+00.00    0  16      0      0      0    484      0      0 1.00000F     0       0      0        0        0
```

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30291 SAMPLE OUTPUT                                              *

   X-SEC     TE   OFFSET    X-S.EXT.   --------CUT--------   -------FILL-------   COMP.    ADJUST    NET    CUT      FILL      MASS
  STATION    MP   STATION     L    R   AREA   ADDED   VOL.   AREA   ADDED   VOL.  FACT.     VOL.     VOL.   ACCUM    ACCUM     ORD.

                                                     14146*                56921*                           14356*   63456*   -49100*

10026+00.00 A 10026+00.00     0    0      0       0    344      0       0    135 1.35000F    182      161   14700    63639    -48939
                                                     14490*                57056*                           14700*   63639*   -48939*

10026+59.00 B 10026+59.00     0   13     93       0    274    140       0   1837 1.00000F   1837    -1563     274     1837    -1563
                                                     14764*                58893*                           14974*   65476*   -50502*

10027+00.00 A 10027+00.00     0    0      0       0      0      0       0      0 1.45000F      0        0   14700    63639    -48939
10027+00.00 B 10027+00.00     0    0    114       0    157    136       0    210 1.00000F    210      -53     431     2047    -1616
                                                     14921*                59103*                           15131*   65686*   -50555*

10028+00.00 A 10028+00.00     0    0    595       0   1102      0       0      0 1.45000F      0     1102   15802    63639    -47837
10028+00.00 B 10028+00.00     0    0      0       0    211      0       0    252 1.00000F    252      -41     642     2299    -1657
                                                     16234*                59355*                           16444*   65938*   -49494*

10029+00.00 A 10029+00.00     0    0    899       0   2767      2       0      4 1.45000F      6     2761   18569    63644    -45075
10029+00.00 B 10029+00.00     0    0      0       0      0      0       0      0 1.00000F      0        0     642     2299    -1657
                                                     19001*                59359*                           19211*   65943*   -46732*
```

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30291 SAMPLE OUTPUT                                                         *

   X-SEC   TE   OFFSET   X-S.EXT.   --------CUT--------   -------FILL--------   COMP.    ADJUST  NET   CUT      FILL      MASS
  STATION  MP   STATION     L   R   AREA   ADDED   VOL.   AREA   ADDED    VOL.  FACT.    VOL.    VOL.  ACCUM    ACCUM     ORD.

10031+00.00 A 10031+00.00   0   0   1819       0      0      0       0      0 0.0    F      0       0       0        0        0
10031+00.00 B 10031+00.00   0   0    348       0      0      1       0      0 1.00000F      0       0       0        0        0
                                                      0*                    0*                              0*       0*       0*

10031+00.02 A 10031+00.00   0   0   2163       0      0      0       0      0 0.0    F      0       0       0        0        0
10031+00.02 B 10031+00.00   0   0      0       0      0      0       0      0 1.00000F      0       0       0        0        0
                                                      0*                    0*                              0*       0*       0*

10031+22.40 A 10031+22.40   0  51   2458       0   1917      0       0      0 1.45000F      0    1917    1917        0     1917
                                                   1917*                    0*                           1917*       0*    1917*

10031+98.30 A 10031+98.30   0  53   3041       0   7729      0       0      0 1.45000F      0    7729    9646        0     9646
                                                   9646*                    0*                           9646*       0*    9646*

10032+96.40 A 10032+96.40   0  52   3144       0  11236      0       0      0 1.45000F      0   11236   20882        0    20882
                                                  20882*                    0*                          20882*       0*   20882*

10033+94.70 A 10033+94.70   0   0   2304       0   9917      1       0      2 1.45000F      3    9914   30799        2    30797
                                                  30799*                    2*                          30799*       2*   30797*

10034+93.30 A 10034+93.30   0   0   2104       0   8049      0       0      2 1.45000F      3    8046   38848        5    38843
                                                  38848*                    4*                          38848*       5*   38843*

10035+92.10 A 10035+92.10   0   0    371       0   4528    137       0    251 1.35000F    339    4189   43376      344    43032
                                                  43376*                  255*                          43376*     344*   43032*

10037+21.00 A 10037+21.00   0   0    996       0   3263      0       0    327 1.35000F    441    2821   46639      786    45853
                                                  46639*                  582*                          46639*     786*   45853*

10038+00.50 A 10038+00.50   0   0   2292       0   4841      0       0      0 1.45000F      0    4841   51480      786    50694
                                                  51480*                  582*                          51480*     786*   50694*

10039+15.10 A 10039+15.10   0   0   2386       0   9928      3       0      6 1.45000F      9    9919   61408      794    60614
                                                  61408*                  588*                          61408*     794*   60614*

10039+15.12 A 10039+15.10   0   0   2275       0      0      0       0      0 0.0    F      9       0   61408      794    60614
                                                  61408*                  588*                          61408*     794*   60614*

10040+00.00 B 10040+00.00   0   0      0       0      0      0       0      0 1.00000F      0       0       0        0        0
                                                  61408*                  588*                          61408*     794*   60614*

10040+00.02 B 10040+00.00   0   0   2076       0      0      0       0      0 1.00000F      0       0       0        0        0
                                                  61408*                  588*                          61408*     794*   60614*

10040+00.01 B 10040+00.01   0   0      0       0      0      0       0      0 1.00000F      0       0       0        0        0
```

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30291 SAMPLE OUTPUT                                                        *

   X-SEC    TE  OFFSET   X-S.EXT. ---------CUT----------- -------FILL---------  COMP.   ADJUST     NET CUT      FILL        MASS
  STATION   MP  STATION     L   R    AREA   ADDED    VOL.  AREA   ADDED   VOL.  FACT.     VOL.    VOL. ACCUM    ACCUM       ORD.

                                                    61408*                 588*                           61408*    794*   60614*

10040+16.00 A 10040+16.00   0   0    2126       0    8223     1       0      2 1.45000F      3    8220    69631     797    68834
10040+16.00 B 10040+16.00   0   0       0       0       0     0       0      0 1.00000F      0       0        0       0        0
10040+25.90 A 10040+25.90   0   0    2126       0       0     1       0      0 0.0    F      0       0    69631     797    68834
10040+25.90 B 10040+25.90   0   0       0       0       0     0       0      0 1.00000F      0       0        0       0        0
                                                    69631*                 590*                           69631*    797*   68834*

10040+82.00 A 10040+82.00   0   0    1875       0    4157     0       0      1 1.45000F      1    4155    73788     799    72989
                                                    73788*                 591*                           73788*    799*   72989*

10046+00.00 A 10046+00.00   0  12     737       0   25056     0       0      0 1.45000F      0   25056    98844     799    98045
10046+00.00 B 10046+00.00   0   0       0       0       0     0       0      0 1.00000F      0       0        0       0        0
                                                    98844*                 591*                           98844*    799*   98045*

10050+00.00 B 10050+00.00   0   0       0       0       0     0       0      0 1.00000F      0       0        0       0        0
                                                    98844*                 591*                           98844*    799*   98045*

10051+00.00 A 10051+00.00   0   0     432    1000   10824     0     500      0 0.90000C   9742   10242   109586    1299   108287
                                                   109668*                 591*                          109586*   1299*  108287*

10056+00.00 A 10056+00.00   0   0     274       0    6537     0       0      0 0.90000C   5883    5883   115469    1299   114170
10056+00.00 B 10056+00.00   0   0       0       0       0     0       0      0 1.00000F      0       0        0       0        0
                                                   116205*                 591*                          115469*   1299*  114170*
```

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30291 SAMPLE OUTPUT                                   *

   X-SEC  TE   OFFSET  X-S.EXT. --------CUT--------   -------FILL-------  COMP.   ADJUST  NET  CUT     FILL     MASS
  STATION MP   STATION    L   R  AREA   ADDED  VOL.   AREA  ADDED   VOL.  FACT.   VOL.    VOL. ACCUM    ACCUM    ORD.

10061+00.00 A 10061+00.00 0   0     87      0     0     32      0      0 0.90000C     0      0      0        0       0
10065+00.00 B 10065+00.00 0   0      0      0     0      0      0      0 1.00000F     0      0      0        0       0
                                                  0*                   0*                           0*       0*      0*

10066+00.00 A 10066+00.00 0   0     36      0  1139    116      0   1370 0.90000C  1025   -345   1025     1370    -345
                                               1139*                1370*                        1025*    1370*   -345*

10071+00.00 A 10071+00.00 0   0      1      0   343    237      0   3269 0.90000C   309  -2960   1334     4639   -3305
                                               1482*                4639*                        1334*    4639*  -3305*

10075+00.00 B 10075+00.00 0   0      0      0     0      0      0      0 1.00000F     0      0      0        0       0
                                               1482*                4639*                        1334*    4639*  -3305*

10076+00.00 A 10076+00.00 0   0      1      0    19    157      0   3648 0.90000C    17  -3631   1351     8287   -6936
                                               1501*                8287*                        1351*    8287*  -6936*

10080+00.00 A 10080+00.00 0   0      1      0    15    220      0   2793 0.90000C    13  -2780   1364    11080   -9716
                                               1516*               11080*                        1364*   11080*  -9716*

10080+50.00 A 10080+50.00 0   0      0      0     1      0      0    204 0.90000C     1   -203   1365    11284   -9919
                                               1517*               11284*                        1365*   11284*  -9919*

10080+75.00 A 10080+75.00 0   0      0      0     0      0      0      0 0.90000C     0      0   1365    11284   -9919
                                               1517*               11284*                        1365*   11284*  -9919*

10081+25.00 A 10081+25.00 0   0      9      0     8    144      0    133 0.90000C     7   -126   1372    11417  -10045
                                               1525*               11417*                        1372*   11417* -10045*

10085+00.00 B 10085+00.00 0   0      0      0     0      0      0      0 1.00000F     0      0      0        0       0
                                               1525*               11417*                        1372*   11417* -10045*

10086+00.00 A 10086+00.00 0   0     77      0   756     38      0   1601 0.90000C   680   -921   2052    13018  -10966
                                               2281*               13018*                        2052*   13018* -10966*

10090+00.00 B 10090+00.00 0   0      0      0     0      0      0      0 1.00000F     0      0      0        0       0
                                               2281*               13018*                        2052*   13018* -10966*
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30291 SAMPLE OUTPUT                                                         *

   X-SEC   TE   OFFSET   X-S.EXT.   --------CUT--------    -------FILL--------   COMP.   ADJUST   NET   CUT      FILL      MASS
  STATION  MP   STATION      L   R  AREA    ADDED   VOL.   AREA   ADDED   VOL.   FACT.     VOL.   VOL.  ACCUM    ACCUM     ORD.

10090+00.00 B 10090+00.00    0   0      0       0      0       0       0      0 1.00000F      0       0       0        0        0
10091+00.00 A 10091+00.00    0   0    115       0      0      39       0      0 0.90000C      0       0       0        0        0
                                                       0*                     0*                              0*       0*       0*

10096+00.00 A 10096+00.00    0   0    427       0   5019       0       0    361 0.90000C   4517    4156    4517      361     4156
                                                    5019*                   361*                           4517*     361*    4156*

10097+50.00 B 10097+50.00    0   0      0       0      0       0       0      0 1.00000F      0       0       0        0        0
                                                    5019*                   361*                           4517*     361*    4156*

10099+99.99 B 10099+99.99    0   0      0       0      0       0       0      0 1.00000F      0       0       0        0        0
                                                    5019*                   361*                           4517*     361*    4156*

10101+00.00 A 10101+00.00    0   0   1109     710  14222       0    1210      0 1.55000F      0   13722   19449     1571    17878
10101+00.00 B 10101+00.00    0   0     96       0    178      41       0     76 1.00000F     76     102     178       76      102
                                                   19419*                   437*                          19627*    1647*   17980*

10101+00.02 A 10101+00.00    0   0   1163       0      0       0       0      0 0.0    F     76       0   19449     1571    17878
10101+00.02 B 10101+00.00    0   0      0       0      0       0       0      0 1.00000F      0       0     178       76      102
                                                   19419*                   437*                          19627*    1647*   17980*

10102+00.00 A 10102+00.00    0   0   1358       0   4669       0       0      0 1.55000F      0    4669   24118     1571    22547
                                                   24088*                   437*                          24296*    1647*   22649*

10103+00.00 A 10103+00.00    0   0   1782       0   5815       0       0      0 1.55000F      0    5815   29933     1571    28362
                                                   29903*                   437*                          30111*    1647*   28464*

10104+00.00 A 10104+00.00    0   0   2217       0   7406       0       0      0 1.55000F      0    7406   37339     1571    35768
                                                   37309*                   437*                          37517*    1647*   35870*

10105+00.00 A 10105+00.00    6   0   2553       0   8833       0       0      0 1.55000F      0    8833   46172     1571    44601
                                                   46142*                   437*                          46350*    1647*   44703*

10106+00.00 A 10106+00.00    0   0   2668       0   9669       0       0      0 1.55000F      0    9669   55841     1571    54270
                                                   55811*                   437*                          56019*    1647*   54372*

10107+00.00 A 10107+00.00    0   0   2703       0   9946       0       0      0 1.55000F      0    9946   65787     1571    64216
                                                   65757*                   437*                          65965*    1647*   64318*

10108+00.00 A 10108+00.00    0   0   3032       0  10620       0       0      0 1.55000F      0   10620   76407     1571    74836
                                                   76377*                   437*                          76585*    1647*   74938*

10109+13.20 A 10109+13.20    3   0   3466       0  13622       0       0      0 1.55000F      0   13622   90029     1571    88458
                                                   89999*                   437*                          90207*    1647*   88560*

10110+00.00 A 10110+00.00    8   0   4128       0  12207       0       0      0 1.55000F      0   12207  102236     1571   100665
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30291 SAMPLE OUTPUT                                                                            *

   X-SEC     TE    OFFSET    X-S.EXT.    --------CUT--------      -------FILL--------    COMP.    ADJUST    NET   CUT        FILL       MASS
  STATION    MP    STATION      L    R   AREA    ADDED    VOL.    AREA    ADDED    VOL.  FACT.     VOL.    VOL.   ACCUM      ACCUM       ORD.

                                                        102206*                    437*                           102414*     1647*   100767*

10111+00.00 A 10111+00.00  27    0   4816        0  16563       0       0      0 1.55000F     0  16563  118799      1571    117228
                                                    118769*                    437*                           118977*     1647*   117330*

10112+00.00 A 10112+00.00  28    0   5298        0  18730       0       0      0 1.55000F     0  18730  137529      1571    135958
                                                    137499*                    437*                           137707*     1647*   136060*

10113+00.00 A 10113+00.00  27    0   5564        0  20115       0       0      0 1.55000F     0  20115  157644      1571    156073
                                                    157614*                    437*                           157822*     1647*   156175*

10114+00.00 A 10114+00.00  33    0   5863        0  21161       0       0      0 1.55000F     0  21161  178805      1571    177234
                                                    178775*                    437*                           178983*     1647*   177336*

10115+00.00 A 10115+00.00  34    0   5910        0  21802       0       0      0 1.55000F     0  21802  200607      1571    199036
                                                    200577*                    437*                           200785*     1647*   199138*

10116+00.00 A 10116+00.00  35    0   5678        0  21459       0       0      0 1.55000F     0  21459  222066      1571    220495
                                                    222036*                    437*                           222244*     1647*   220597*

10117+00.00 A 10117+00.00  34    0   5642        0  20963       0       0      0 1.55000F     0  20963  243029      1571    241458
                                                    242999*                    437*                           243207*     1647*   241560*

10118+00.00 A 10118+00.00  32    0   4141        0  18117       0       0      0 1.55000F     0  18117  261146      1571    259575
                                                    261116*                    437*                           261324*     1647*   259677*

10119+00.00 A 10119+00.00  25    0   3615        0  14363       0       0      0 1.55000F     0  14363  275509      1571    273938
                                                    275479*                    437*                           275687*     1647*   274040*

10119+67.00 A 10119+67.00  22    0   3407        0   8712       0       0      0 1.55000F     0   8712  284221      1571    282650
                                                    284191*                    437*                           284399*     1647*   282752*
```

```
30291 SAMPLE OUTPUT                                                        *

  X-SEC     TE    OFFSET    X-S.EXT.  --------CUT---------  -------FILL--------    COMP.   ADJUST     NET      CUT      FILL     MASS
 STATION    MP    STATION     L   R    AREA  ADDED    VOL.   AREA  ADDED    VOL.   FACT.     VOL.    VOL.    ACCUM    ACCUM     ORD.

10120+75.00 A 10120+75.00  23   0   3702       0       0      0       0       0 0.0    F       0       0        0        0        0
                                                       0*                     0*                                0*       0*       0*

10122+00.00 A 10122+00.00  46   0   1761       0   12646     84       0     194 1.45000F     281   12364    12646      281    12365
                                                   12646*                   194*                            12646*     281*  12365*

10123+00.00 A 10123+00.00  31   0    545       0    4270    545       0    1165 1.20000F    1398    2872    16916     1679    15237
                                                   16916*                  1359*                            16916*    1679*  15237*

10123+74.00 A 10123+74.00  24   0    329       0    1198    756       0    1783 1.20000F    2140    -941    18114     3818    14296
                                                   18114*                  3142*                            18114*    3818*  14296*

10125+00.00 A 10125+00.00   1   0      0       0     768   1617       0    5537 1.20000F    6644   -5876    18882    10463     8419
                                                   18882*                  8679*                            18882*   10463*   8419*

10125+83.00 A 10125+83.00   1   0      0       0       0   1660       0    5037 1.20000F    6044   -6044    18882    16507     2375
                                                   18882*                 13716*                            18882*   16507*   2375*

10127+00.00 A 10127+00.00  10   0     40       0      87    675       0    5059 1.20000F    6071   -5983    18969    22578    -3609
                                                   18969*                 18775*                            18969*   22578*  -3609*

10128+00.00 A 10128+00.00  14   0     46       0     159    662       0    2476 1.20000F    2971   -2812    19128    25549    -6421
                                                   19128*                 21251*                            19128*   25549*  -6421*

10129+00.00 A 10129+00.00  15   0     48       0     174    537       0    2220 1.20000F    2664   -2489    19302    28213    -8911
                                                   19302*                 23471*                            19302*   28213*  -8911*

10130+00.00 A 10130+00.00  15   0     83       0     243    654       0    2206 1.10000F    2427   -2184    19545    30640   -11095
                                                   19545*                 25677*                            19545*   30640* -11095*

10130+67.00 A 10130+67.00  15   0     60       0     177    647       0    1614 1.10000F    1775   -1598    19722    32415   -12693
                                                   19722*                 27291*                            19722*   32415* -12693*

10132+00.00 A 10132+00.00  18   0    122       0     448    443       0    2685 1.10000F    2953   -2505    20170    35368   -15198
                                                   20170*                 29976*                            20170*   35368* -15198*

10132+75.00 A 10132+75.00  17   0    116       0     331    253       0     967 1.10000F    1064    -733    20501    36432   -15931
                                                   20501*                 30943*                            20501*   36432* -15931*

10133+99.70 A 10133+99.70   9   0    249       0     843     58       0     718 1.10000F     790      53    21344    37222   -15878
20132+55.40 A 20132+55.40   9   0    249       0       0     58       0       0 1.10000F       0       0    21344    37222   -15878
                                                   21344*                 31661*                            21344*   37222* -15878*

20132+65.00 A 20132+65.00  14   0    267       0      92     60       0      21 1.10000F      23      69    21436    37245   -15809
                                                   21436*                 31682*                            21436*   37245* -15809*

20134+00.00 A 20134+00.00  27   0    503       0    1925     75       0     337 1.10000F     371    1554    23361    37616   -14255
```

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30291 SAMPLE OUTPUT                                               *

  X-SEC      TE   OFFSET    X-S.EXT.    --------CUT--------    -------FILL-------   COMP.    ADJUST   NET    CUT      FILL     MASS
 STATION     MP   STATION     L   R     AREA   ADDED   VOL.    AREA  ADDED   VOL.   FACT.     VOL.    VOL.   ACCUM    ACCUM    ORD.

                                                      23361*                 32019*                           23361*   37616*   -14255*

20135+00.00 A 20135+00.00   26    0     446       0    1757     64      0     257 1.10000F    283    1474   25118    37899    -12781
                                                      25118*                 32276*                           25118*   37899*   -12781*

20136+00.00 A 20136+00.00   19    0     541       0    1828     32      0     178 1.10000F    196    1632   26946    38095    -11149
                                                      26946*                 32454*                           26946*   38095*   -11149*

20137+00.00 A 20137+00.00   17   13     564       0    2046     37      0     128 1.10000F    141    1905   28992    38236     -9244
                                                      28992*                 32582*                           28992*   38236*    -9244*

20138+00.00 A 20138+00.00   22   18     680       0    2304     35      0     133 1.10000F    146    2158   31296    38382     -7086
                                                      31296*                 32715*                           31296*   38382*    -7086*

20139+00.00 A 20139+00.00   19    0     372       0    1948     57      0     170 1.10000F    187    1761   33244    38569     -5325
                                                      33244*                 32885*                           33244*   38569*    -5325*

20140+00.00 A 20140+00.00   20    0     302       0    1248     23      0     148 1.10000F    163    1085   34492    38732     -4240
                                                      34492*                 33033*                           34492*   38732*    -4240*

20141+00.00 A 20141+00.00   14  340    2838       0    5815      0      0      43 1.10000F     47    5768   40307    38779      1528
                                                      40307*                 33076*                           40307*   38779*     1528*

20141+33.00 A 20141+33.00   16   81    1466       0    2630      0      0       0 1.10000F      0    2630   42937    38779      4158
                                                      42937*                 33076*                           42937*   38779*     4158*

20143+00.00 A 20143+00.00    9  100    1397       0    8854      0      0       0 1.10000F      0    8854   51791    38779     13012
                                                      51791*                 33076*                           51791*   38779*    13012*

20144+00.00 A 20144+00.00    0    0     638       0    3769      0      0       0 1.10000F      0    3769   55560    38779     16781
                                                      55560*                 33076*                           55560*   38779*    16781*

20145+00.00 A 20145+00.00    0    0     657       0    2398      0      0       0 1.10000F      0    2398   57958    38779     19179
                                                      57958*                 33076*                           57958*   38779*    19179*

20146+00.00 A 20146+00.00    0    0     561       0    2256      0      0       0 1.10000F      0    2256   60214    38779     21435
                                                      60214*                 33076*                           60214*   38779*    21435*

20147+00.00 A 20147+00.00    5    0     487       0    1941      0      0       0 1.10000F      0    1941   62155    38779     23376
                                                      62155*                 33076*                           62155*   38779*    23376*

20148+00.00 A 20148+00.00    7    0     640       0    2087      0      0       0 1.10000F      0    2087   64242    38779     25463
                                                      64242*                 33076*                           64242*   38779*    25463*

20149+00.00 A 20149+00.00    0    0     646       0    2381      0      0       0 1.10000F      0    2381   66623    38779     27844
                                                      66623*                 33076*                           66623*   38779*    27844*

20150+00.00 A 20150+00.00   11    0     669       0    2435      0      0       0 1.10000F      0    2435   69058    38779     30279
```

```
30291 SAMPLE OUTPUT                                                         *

   X-SEC   TE   OFFSET   X-S.EXT.   --------CUT--------   -------FILL--------    COMP.   ADJUST   NET   CUT      FILL     MASS
  STATION  MP   STATION     L   R   AREA   ADDED   VOL.   AREA   ADDED    VOL.   FACT.    VOL.    VOL.  ACCUM    ACCUM     ORD.

                                                  69058*                 33076*                          69058*   38779*   30279*


  END OF EARTHWORK RUN
```

```
                30291 SAMPLE OUTPUT

       VERTICAL SCALE =      33330 CU/YDS PER INCH     HORIZONTAL SCALE NONE

 STATION    MASS ORDINATE           BALANCE LINE
   AREA =         0.
    0+00.00         0                     +
   AREA =        72.
    0+99.90      -145                     +
   AREA =       782.
    1+99.40     -1426                     +
   AREA =      1044.
    2+51.90     -2553                     +
   AREA =      1509.
10002+01.30     -3939                    *
   AREA =      4363.
10002+84.40     -6561                    *1
   AREA =     10064.
10004+00.00    -10851                  *  1
   AREA =     14014.
10005+00.00    -17176                *    1
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =         3.
10005+00.02    -17176                *    1
   AREA =     21598.
10006+00.00    -26029              *      1
   AREA =     28036.
10006+93.00    -34263           *         1
   AREA =     78775.
10009+00.00    -41848         *           1
   AREA =     41235.
10010+00.00    -40621         *           1
   AREA =     40668.
10011+00.00    -40714         *           1
   AREA =     40751.
10012+00.00    -40788         *           1
   AREA =     40741.
10013+00.00    -40693         *           1
   AREA =     40712.
10014+00.00    -40730         *           1
   AREA =     40705.
10015+00.00    -40680         *           1
   AREA =     40598.
10016+00.00    -40515         *           1
   AREA =     40399.
10017+00.00    -40282         *           1
   AREA =     40120.
10018+00.00    -39958          *          1
   AREA =     19952.
10018+50.00    -39850          *          1
   AREA =     19933.
10019+00.00    -39883          *          1
   AREA =     40150.
10020+00.00    -40417         *           1
   AREA =     62044.
10021+50.00    -42308         *           1
   AREA =     36270.
10022+34.00    -44048        *            1
   AREA =     29525.
10023+00.00    -45423        *            1
   AREA =     46365.
10024+00.00    -47307       *             1
```

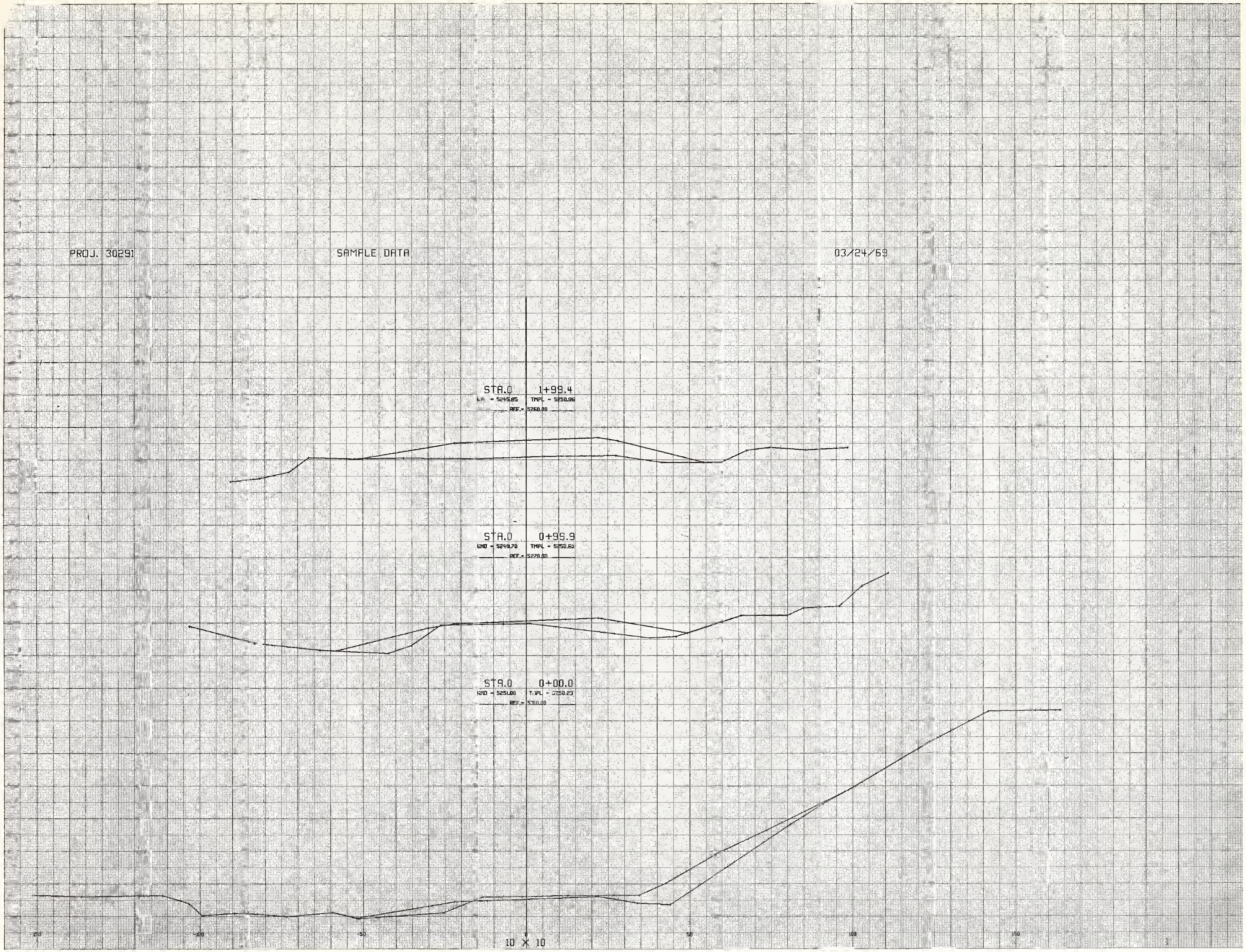
```
   AREA =     48204.
10025+00.00    -49100       *             1
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =        10.
10025+00.02    -49100       *             1
   AREA =     49010.
10026+00.00    -48939       *             1
   AREA =     29335.
10026+59.00    -50502      *              1
   AREA =     20717.
10027+00.00    -50555      *              1
   AREA =     50025.
10028+00.00    -49494       *             1
   AREA =     48113.
10029+00.00    -46732       *             1
   AREA =     46732.

10031+00.00 = BALANCE STATION              19211. = CUT ACCUM              65944. = FILL ACCUM         20314. = MILE YARDS

10031+00.00         0                     +
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =         0.
10031+00.02         0                     +
   AREA =       215.
10031+22.40      1917                     +
   AREA =      4388.
10031+98.30      9646                       *
   AREA =     14974.
10032+96.40     20882                     1     *
   AREA =     25400.
10033+94.70     30797                     1        *
   AREA =     34333.
10034+93.30     38843                     1          *
   AREA =     40446.
10035+92.10     43032                     1           *
   AREA =     57286.
10037+21.00     45853                     1            *
   AREA =     38377.
10038+00.50     50694                     1              *
   AREA =     63779.
10039+15.10     60614                     1                 *
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =        12.
10039+15.12     60614                     1                 *
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =     51449.
10040+00.00     60614                     1                 *
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =        12.
10040+00.02     60614                     1                 *
   AREA =        -6.
10040+00.01     60614                     1                 *
   AREA =     10349.
10040+16.00     68834                     1                   *
   AREA =     39781.
10040+82.00     72989                     1                    *
   AREA =    442978.
10046+00.00     98045                     1                            *
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =    392180.
10050+00.00     98045                     1                            *
   AREA =    103166.
10051+00.00    108287                     1                               *
   AREA =    556142.
10056+00.00    114170                     1                                 *
   AREA =    285425.
```

```
10061+00.00 = BALANCE STATION             115469. = CUT ACCUM                1299. = FILL ACCUM         40922. = MILE YARDS

10061+00.00         0                     +
   AREA =       863.
10066+00.00      -345                     +
   AREA =      9125.
10071+00.00     -3305                     +
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =     13220.
10075+00.00     -3305                     +
   AREA =      5121.
10076+00.00     -6936                   *
   AREA =     33304.
10080+00.00     -9716                   * 1
   AREA =      4909.
10080+50.00     -9919                   * 1
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =      2480.
10080+75.00     -9919                   * 1
   AREA =      4991.
10081+25.00    -10045                  *  1
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =     37669.
10085+00.00    -10045                  *  1
   AREA =     10506.
10086+00.00    -10966                  *  1
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =     43864.
10090+00.00    -10966                  *  1
   AREA =         0.

10090+00.00 = BALANCE STATION               2052. = CUT ACCUM               13018. = FILL ACCUM            3145. = MILE YARDS

10090+00.00         0                     +
   AREA =     12468.
10096+00.00      4156                      *
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =      6234.
10097+50.00      4156                     1*
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =     10390.
10099+99.99      4156                     1*
   AREA =     11069.
10101+00.00     17980                     1    *
  THERE IS A BRIDGE OR AN EQUATION AT THESE STATIONS
   AREA =         4.
10101+00.02     17980                     1    *
   AREA =     20310.
10102+00.00     22649                     1     *
   AREA =     25557.
10103+00.00     28464                     1       *
   AREA =     32167.
10104+00.00     35870                     1         *
   AREA =     40287.
10105+00.00     44703                     1            *
   AREA =     49538.
10106+00.00     54372                     1               *
   AREA =     59345.
10107+00.00     64318                     1                  *
   AREA =     69628.
10108+00.00     74938                     1                     *
   AREA =     92540.
10109+13.20     88560                     1                         *
   AREA =     82168.
10110+00.00    100767                     1                             *
```

```
   AREA =    109049.
10111+00.00    117330                     1                                  *
   AREA =    126695.
10112+00.00    136060                     1                                       *
   AREA =    146118.
10113+00.00    156175                     1                                             *
   AREA =    166756.
10114+00.00    177336                     1                                                    *
   AREA =    188237.
10115+00.00    199138                     1                                                          *
   AREA =    209867.
10116+00.00    220597                     1                                                                 *
   AREA =    231078.
10117+00.00    241560                     1                                                                       *
   AREA =    250618.
10118+00.00    259677                     1                                                                            *
   AREA =    266858.
10119+00.00    274040                     1                                                                                 *
   AREA =    186525.
10119+67.00    282752                     1                                                                                    *
   AREA =    152686.

10120+75.00 = BALANCE STATION             284399. = CUT ACCUM                1647. = FILL ACCUM         48223. = MILE YARDS

10120+75.00          0                     +
   AREA =      7728.
10122+00.00     12365                        *
   AREA =     13801.
10123+00.00     15237                     1   *
   AREA =     10927.
10123+74.00     14296                     1   *
   AREA =     14310.
10125+00.00      8419                     1 *
   AREA =      4480.
10125+83.00      2375                     +
   AREA =       551.

10126+29.44 = BALANCE STATION              18917. = CUT ACCUM               18917. = FILL ACCUM           981. = MILE YARDS

   AREA =      1273.
10127+00.00     -3609                    *
   AREA =      5015.
10128+00.00     -6421                    *1
   AREA =      7666.
10129+00.00     -8911                   * 1
   AREA =     10003.
10130+00.00    -11095                  *  1
   AREA =      7969.
10130+67.00    -12693                  *  1
   AREA =     18548.
10132+00.00    -15198                 *   1
   AREA =     11673.
10132+75.00    -15931                 *   1
   AREA =     19833.
10133+99.70    -15878                 *   1
   AREA =      1521.
20132+65.00    -15809                 *   1
   AREA =     20293.
20134+00.00    -14255                 *   1
   AREA =     13518.
20135+00.00    -12781                  *  1
   AREA =     11965.
20136+00.00    -11149                  *  1
   AREA =     10197.
20137+00.00     -9244                   * 1
   AREA =      8165.
```

```
20138+00.00     -7086                    * 1
   AREA =      6206.
20139+00.00     -5325                     *1
   AREA =      4783.
20140+00.00     -4240                     *1
   AREA =      1558.

20140+73.51 = BALANCE STATION               19850. = CUT ACCUM              19850. = FILL ACCUM          3034. = MILE YARDS

   AREA =       202.
20141+00.00      1528                      +
   AREA =       938.
20141+33.00      4158                       *
   AREA =     14337.
20143+00.00     13012                      1  *
   AREA =     14897.
20144+00.00     16781                      1    *
   AREA =     17980.
20145+00.00     19179                      1    *
   AREA =     20307.
20146+00.00     21435                      1     *
   AREA =     22406.
20147+00.00     23376                      1      *
   AREA =     24420.
20148+00.00     25463                      1      *
   AREA =     26654.
20149+00.00     27844                      1       *
   AREA =     29062.
20150+00.00     30279                      1        *

20150+00.00 = FINAL STATION                 30291. = CUT ACCUM                 12. = FILL ACCUM          3242. = MILE YARDS
```

```
                                             PROJECT SUMMARY

BALANCE STATION                 CUT ACCUM                  FILL ACCUM                  MILE YARDS
     10031+00.00                  19211.                     65944.                      20314.
     10061+00.00                 115469.                      1299.                      40922.
     10090+00.00                   2052.                     13018.                       3145.
     10120+75.00                 284399.                      1647.                      48223.
     10126+29.44                  18917.                     18917.                        981.
     20140+73.51                  19850.                     19850.                       3034.
     20150+00.00                  30291.                        12.                       3242.
                        --------------------       --------------------        ------------------

             TOTALS =            490189.                    120688.                     119861.
```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03/24/69
STA.0 1+99.4
GND - 5245.85 TMPL - 5250.96
REF.- 5260.00
STA.0 0+99.9
GND - 5249.70 TMPL - 5250.60
REF - 5270.00
STA.0 0+00.0
GND - 5251.00 TMPL - 5250.23
REF - 5310.00
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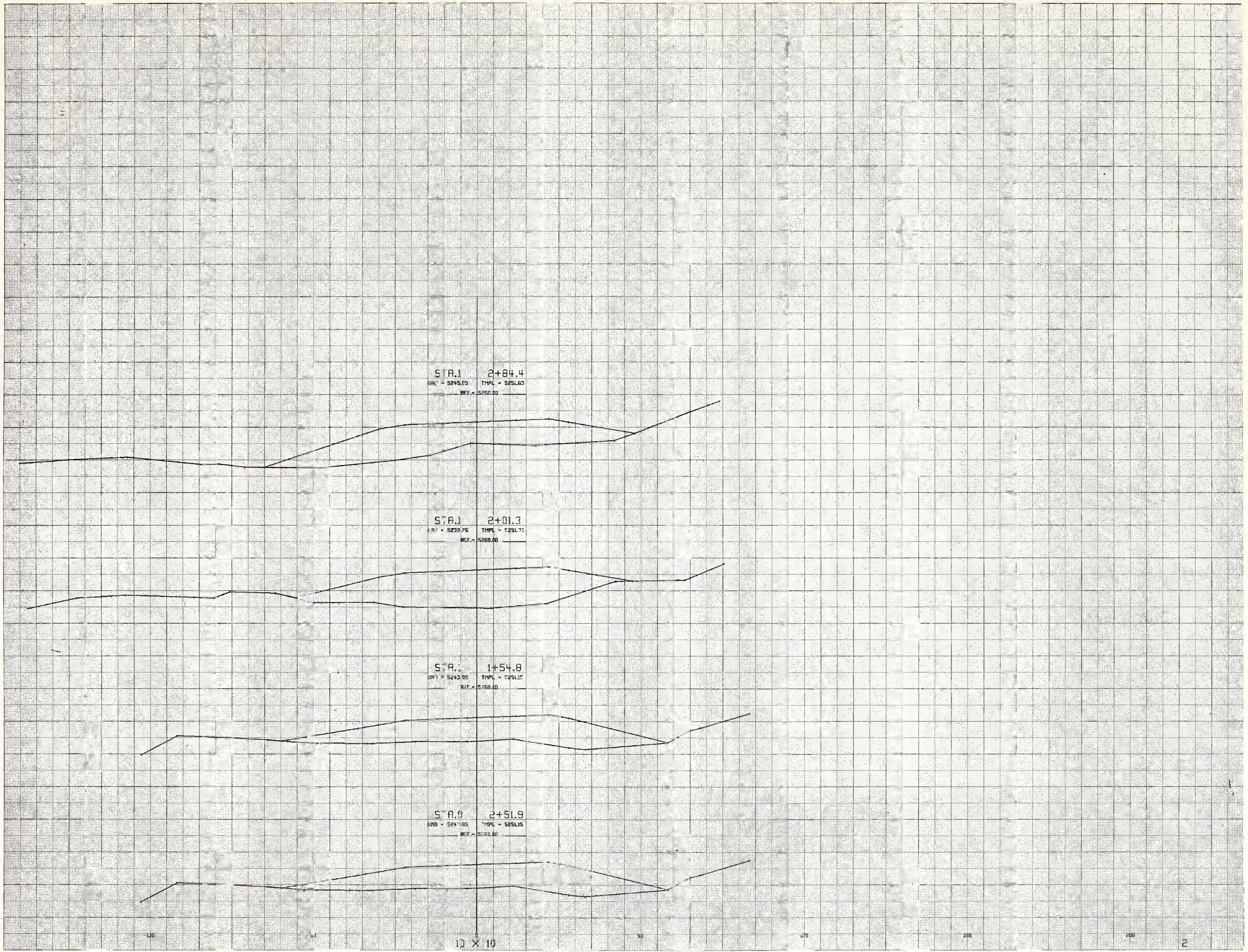
-100
-50
0
50
100
150
10 X 10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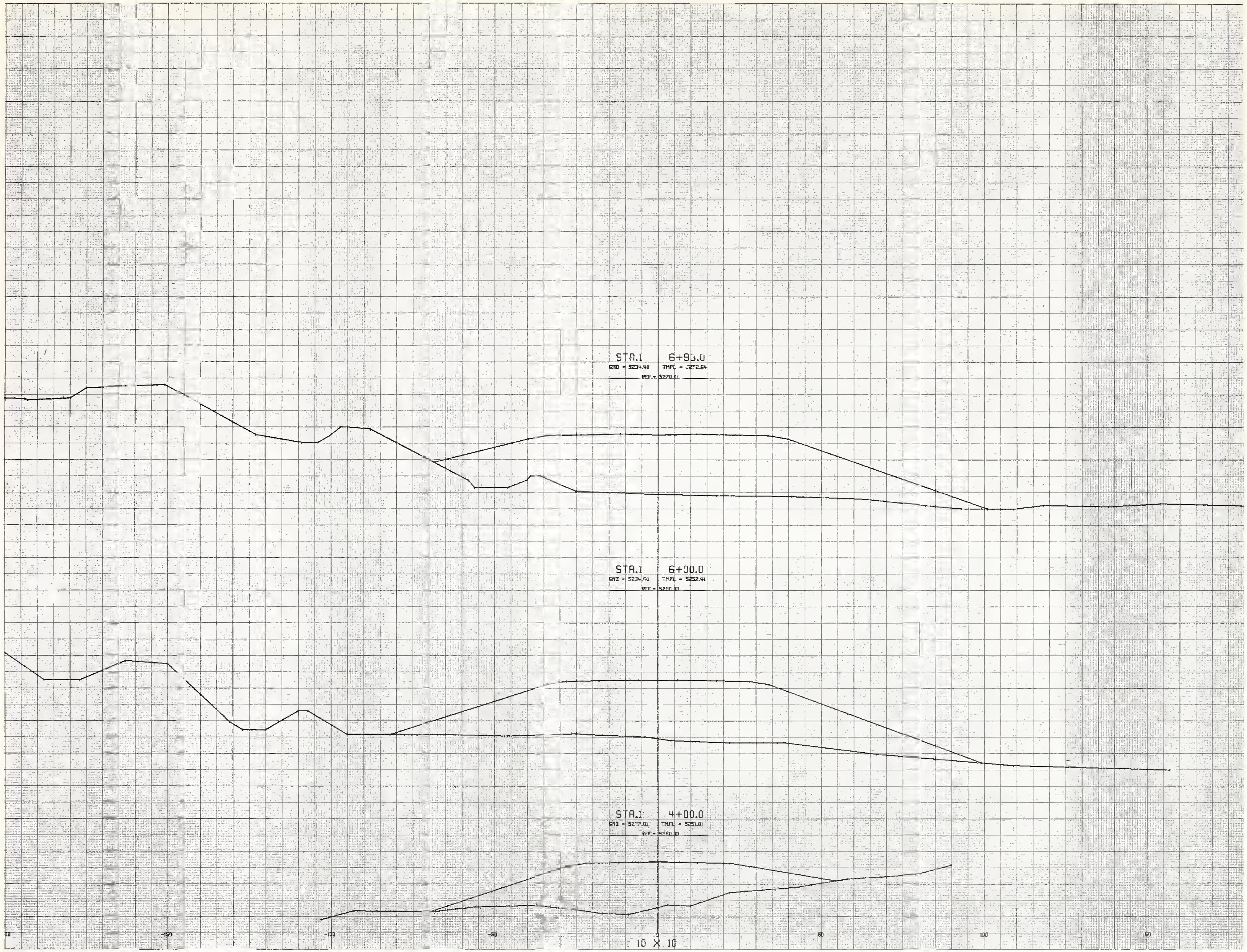
GRD - 5245.05 TMPL - 5251.63
REF. - 5260.00
STA.1 2+01.3
GRD - 5239.75 TMPL - 5251.72
REF. - 5260.00
STA.1 1+54.8
GRD - 5240.95 TMPL - 5251.15
REF. - 5260.00
STA.0 2+51.9
GND - 5247.95 TMPL - 5251.15
REF. - 5260.00
100
50
50
100
150
200
10 X 10
2


STA.1 6+93.0
GND - 5234.40 TMPL - 5252.64
REF.- 5270.00
STA.1 6+00.0
GND - 5234.90 TMPL - 5252.41
REF - 5280.00
STA.1 4+00.0
GND - 5277.81 TMPL - 5251.81
REF.- 5260.00
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100
150
10 X 10

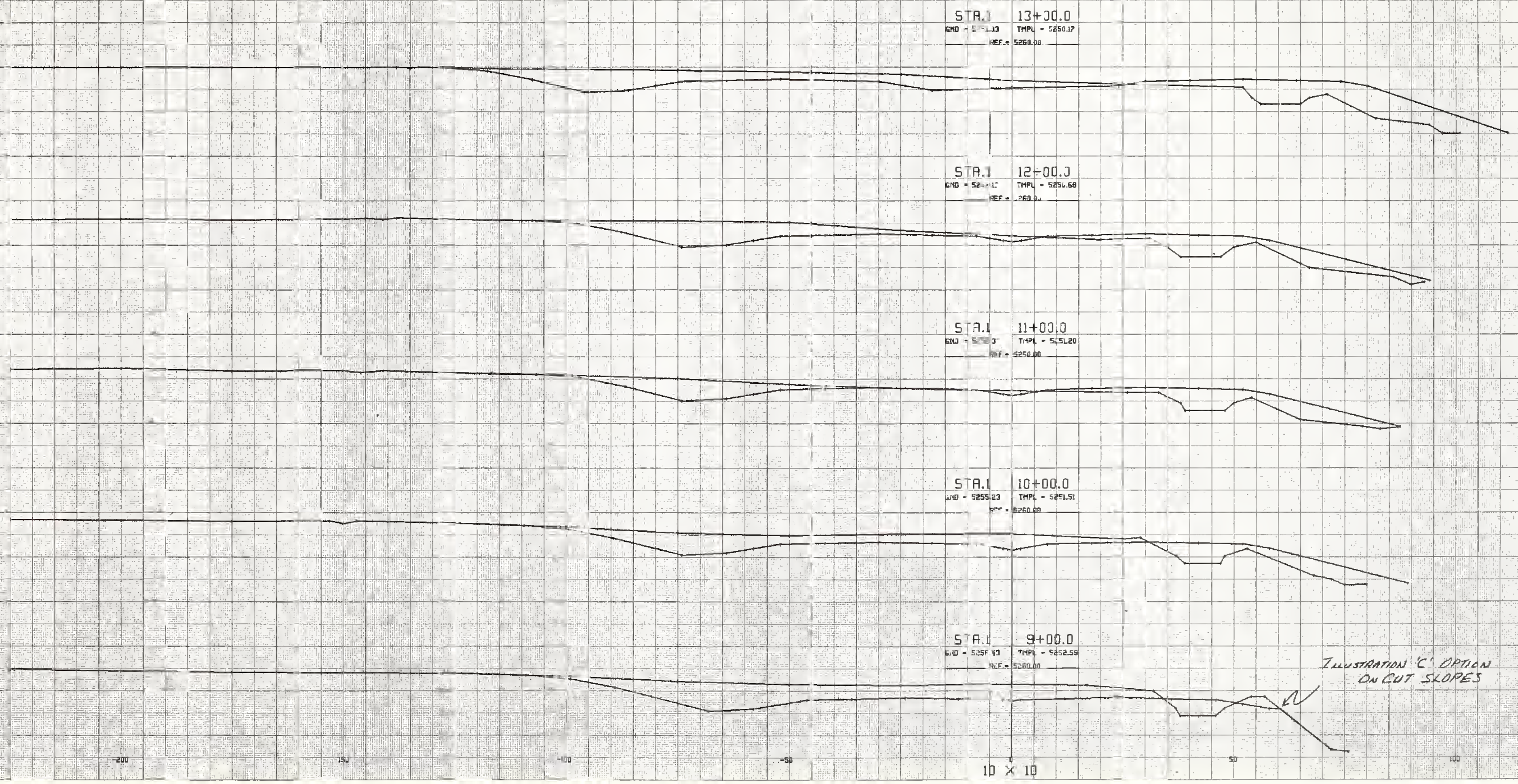
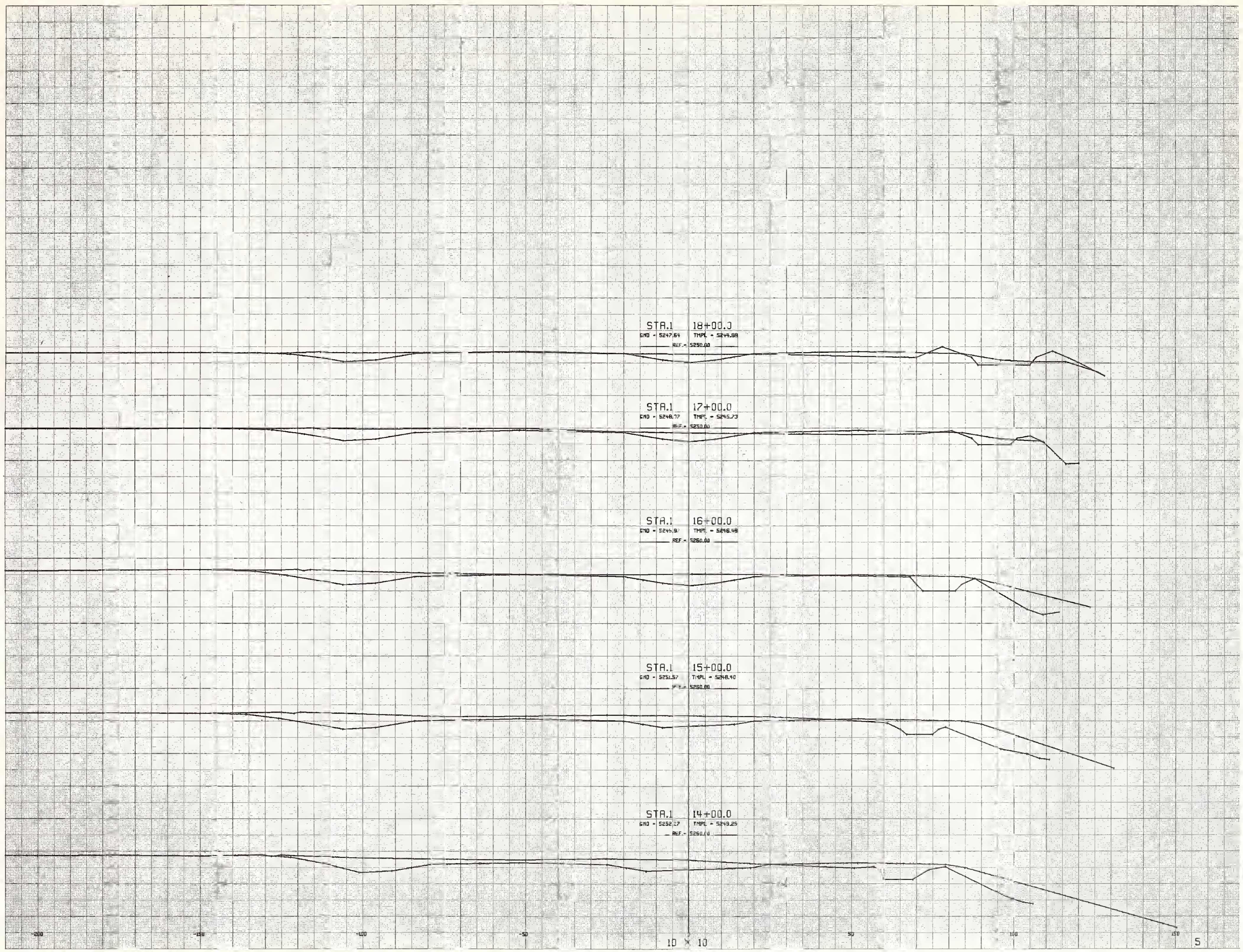
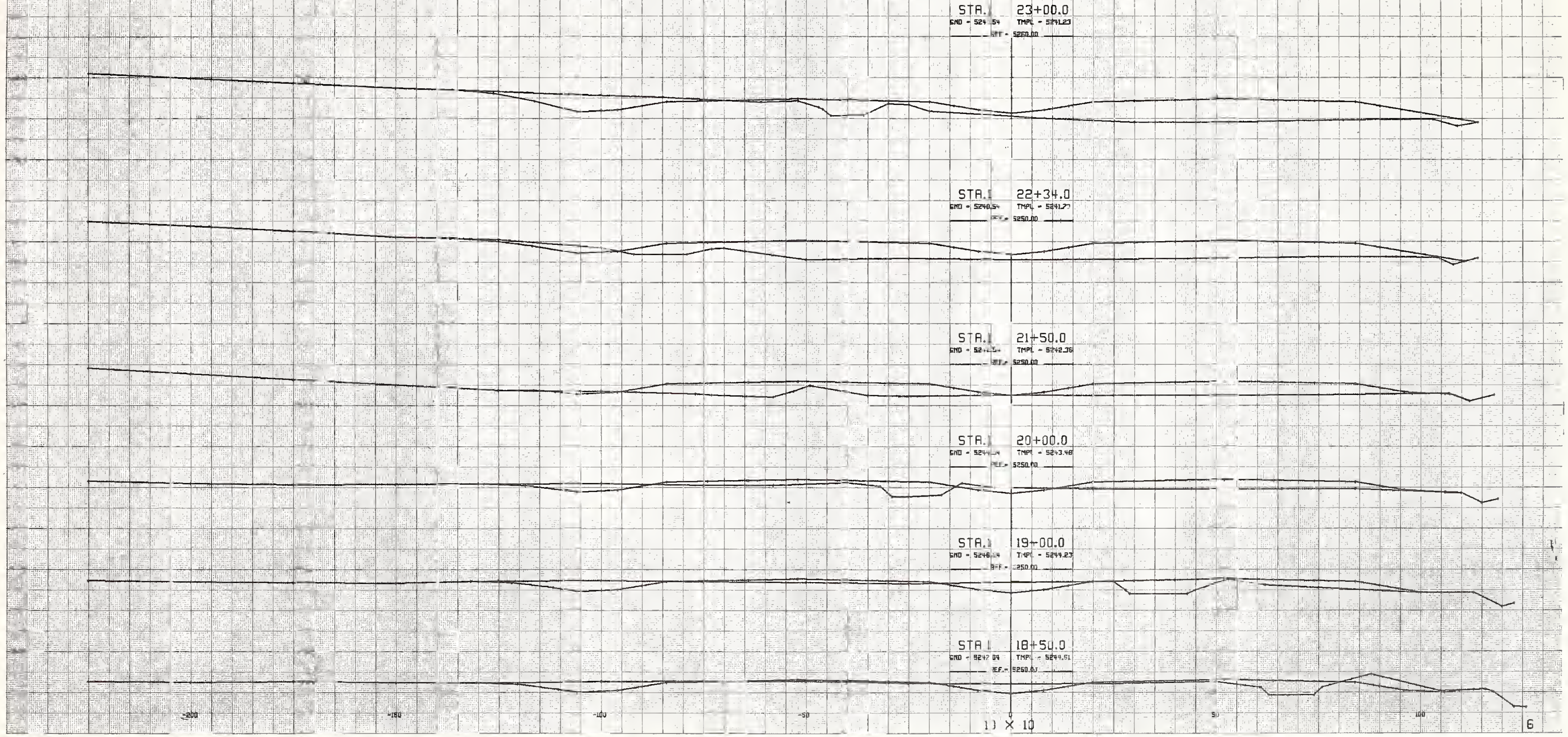


ILLUSTRATION 'C' OPTION
ON CUT SLOPES




STA.1 23+00.0
GND - 524 .54 TMPL - 5241.23
REF - 5250.00
STA.1 22+34.0
GND - 5240.54 TMPL - 5241.27
REF - 5250.00
STA.1 21+50.0
GND - 52 TMPL - 5242.36
REF - 5250.00
STA.1 20+00.0
GND - 5244 4 TMPL - 5243.48
REF - 5250.00
STA.1 19+00.0
GND - 5246 4 TMPL - 5249.23
REF - 5250.00
STA 1 18+50.0
GND - 5247 04 TMPL - 5249.61
REF - 5250.0
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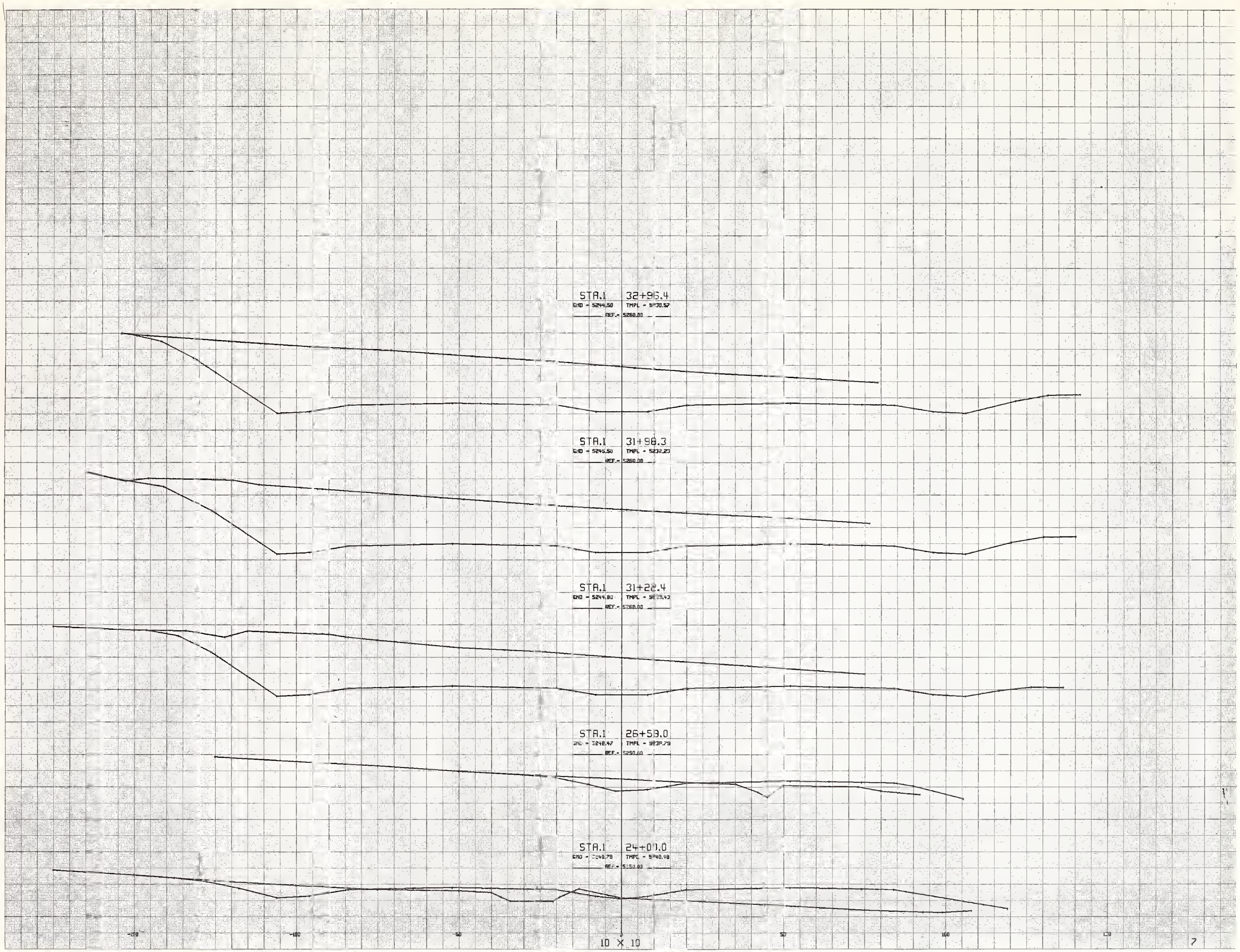
50
100
10 X 10


STA.1 32+96.4
GND - 5244.50
TMPL - 5230.57
REF.- 5260.00
STA.1 31+98.3
GND - 5245.50
TMPL - 5232.23
REF.- 5260.00
STA.1 31+22.4
GND - 5244.80
TMPL - 5233.43
REF.- 5260.00
STA.1 26+58.0
GND - 5248.47
TMPL - 5238.79
REF.- 5250.00
STA.1 24+00.0
GND - 5240.78
TMPL - 5240.98
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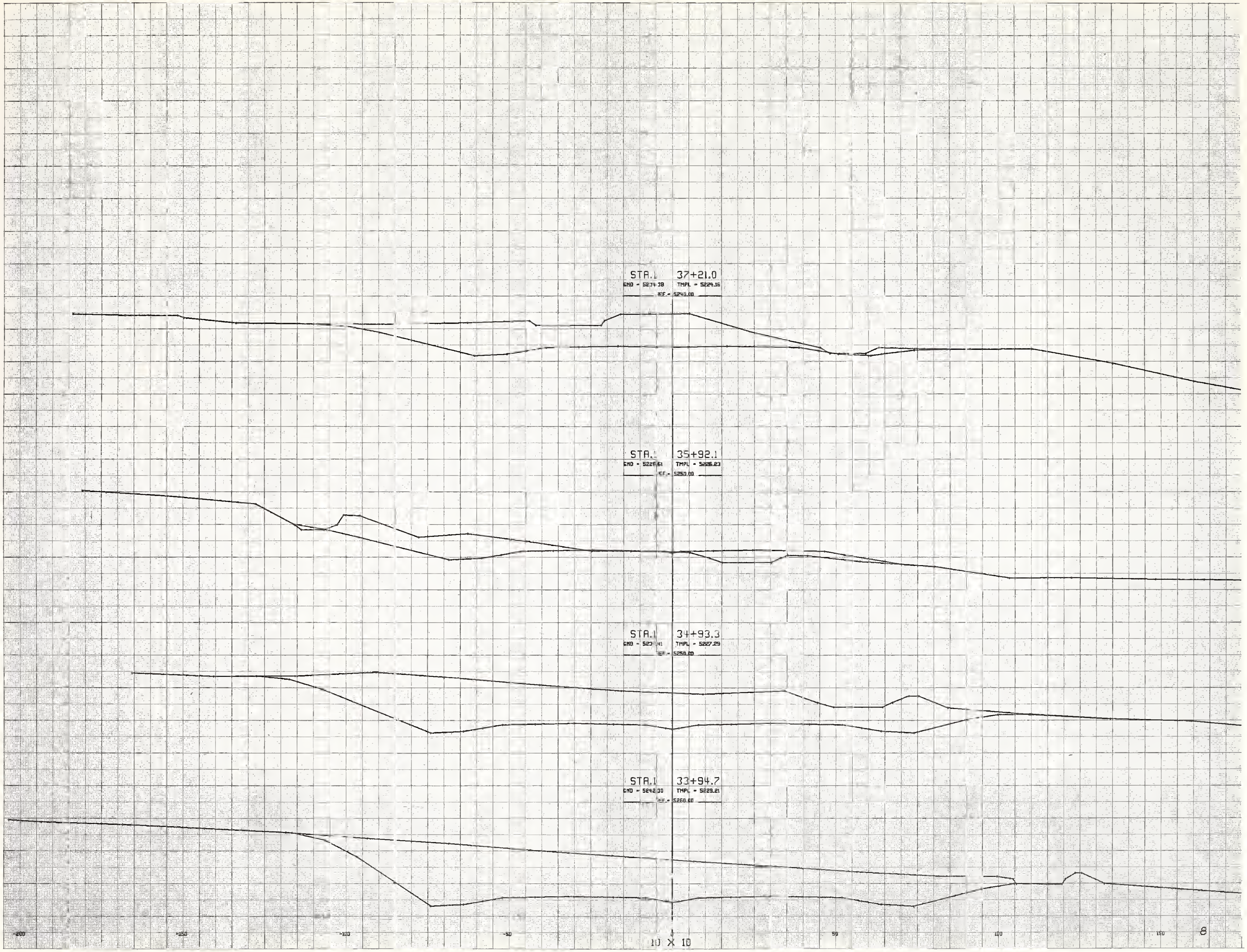
150
10 X 10
7


STA.1 37+21.0
GND = 5234.38 TMPL = 5229.16
REF = 5240.00
STA.1 35+92.1
GND = 5226.61 TMPL = 5226.23
REF = 5250.00
STA.1 34+93.3
GND = 523[illegible].41 TMPL = 5227.29
REF = 5250.00
STA.1 33+94.7
GND = 5242.30 TMPL = 5229.21
REF = 5260.00
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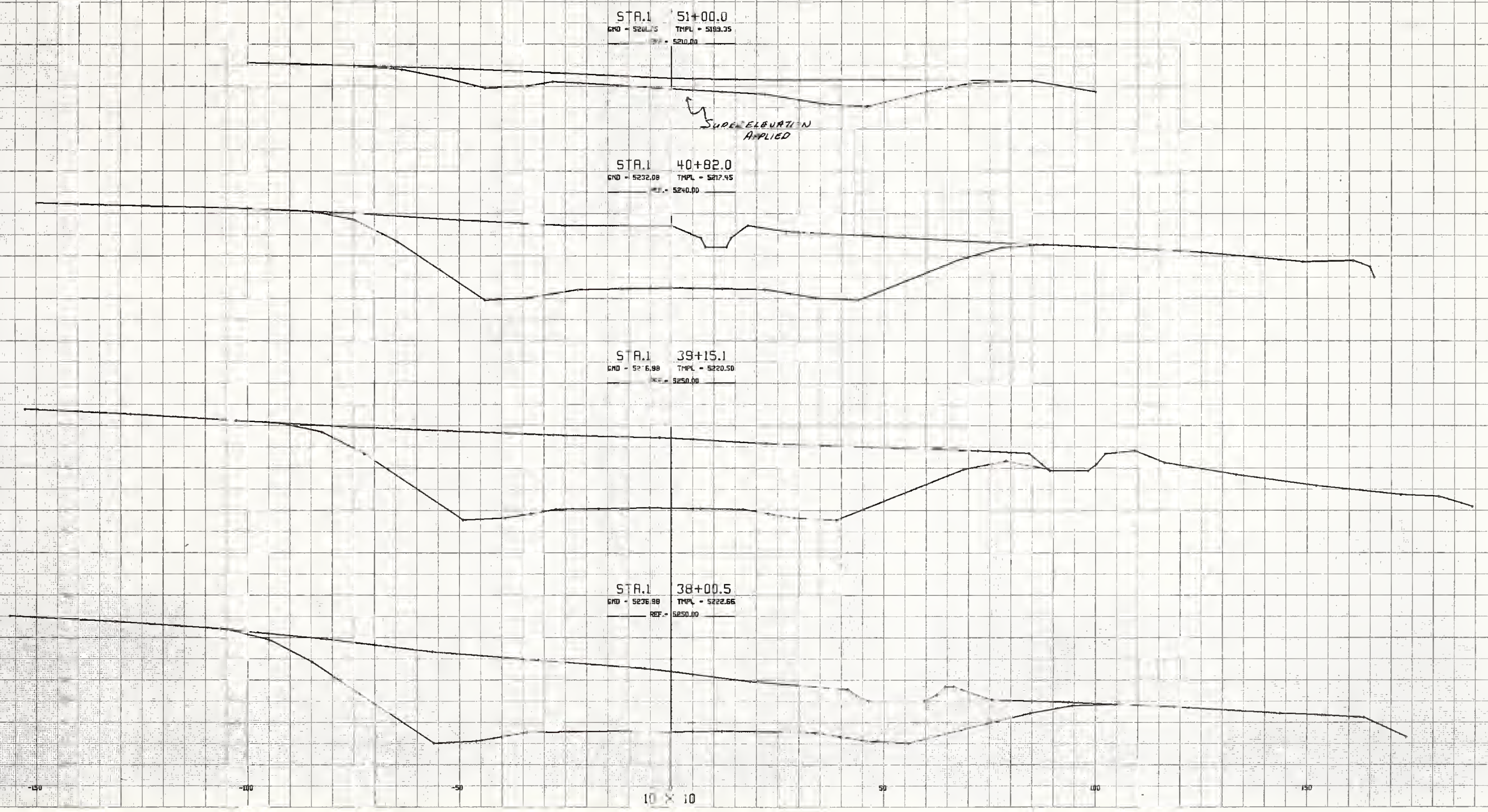
100
150
10 X 10
8


STA.1 51+00.0
GND - 5201.75 TMPL - 5199.35
REF - 5210.00
SUPERELEVATION APPLIED
STA.1 40+82.0
GND - 5232.08 TMPL - 5217.45
REF - 5240.00
STA.1 39+15.1
GND - 5226.98 TMPL - 5220.50
REF - 5250.00
STA.1 38+00.5
GND - 5236.98 TMPL - 5222.66
REF - 5250.00
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50
100
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10 X 10

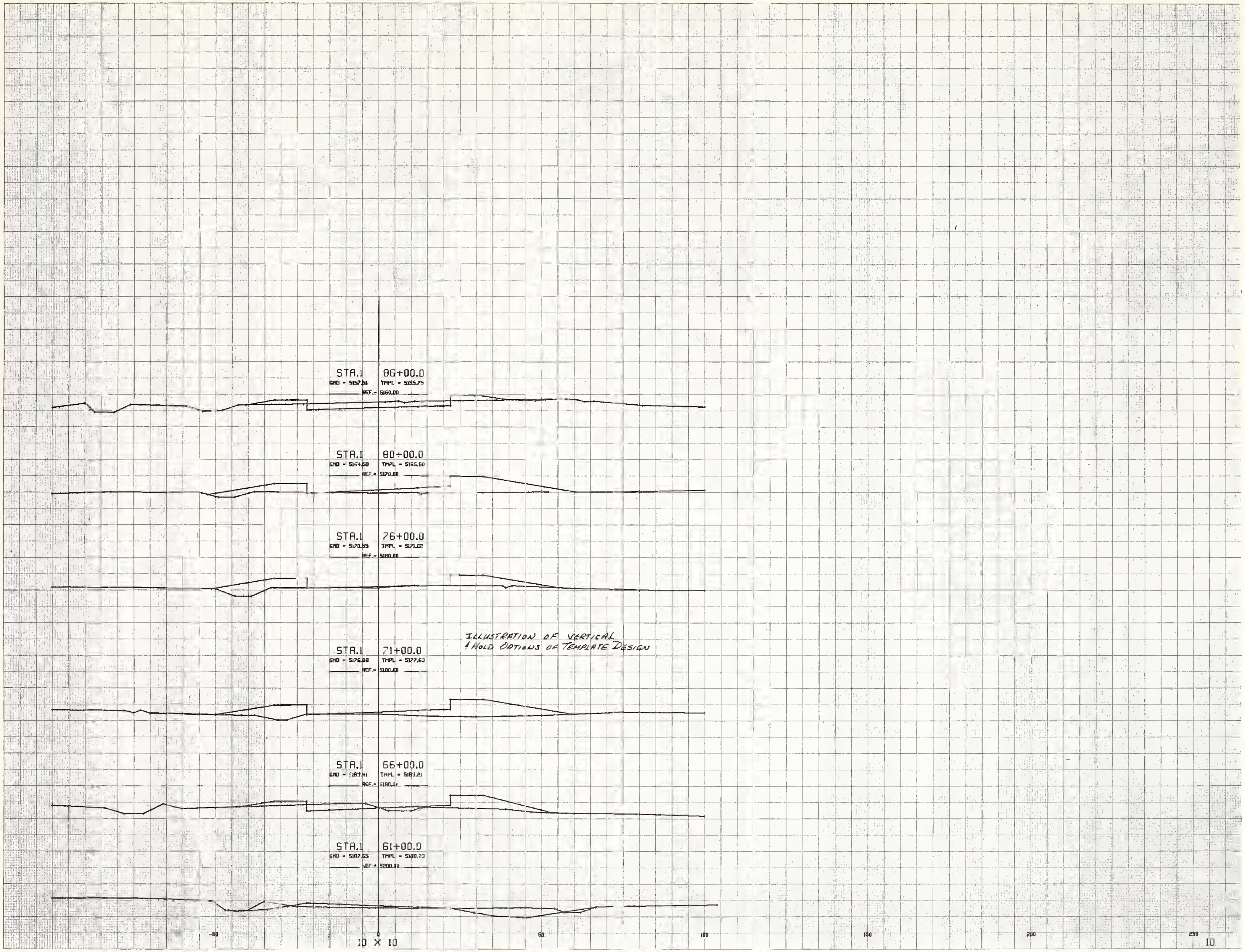
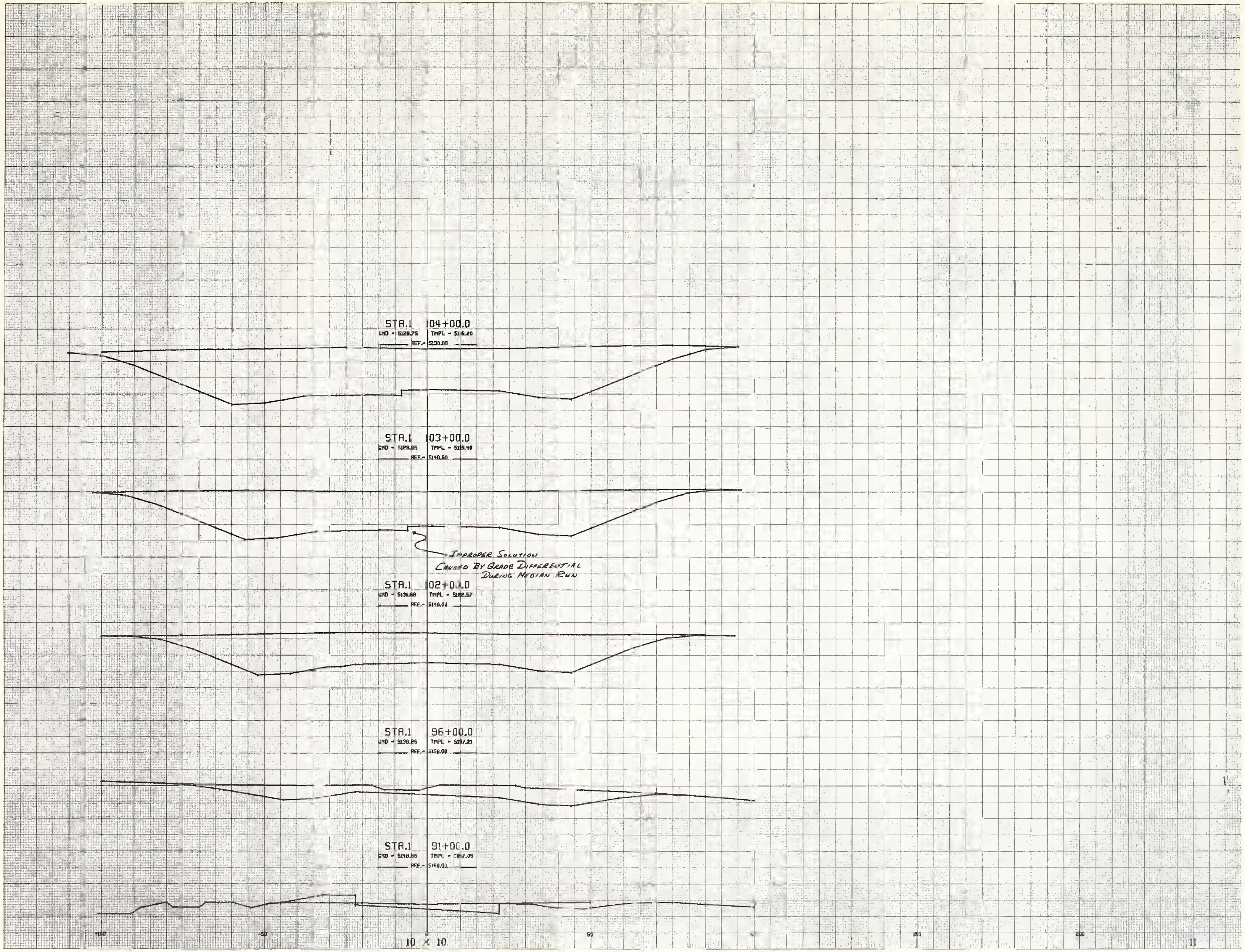
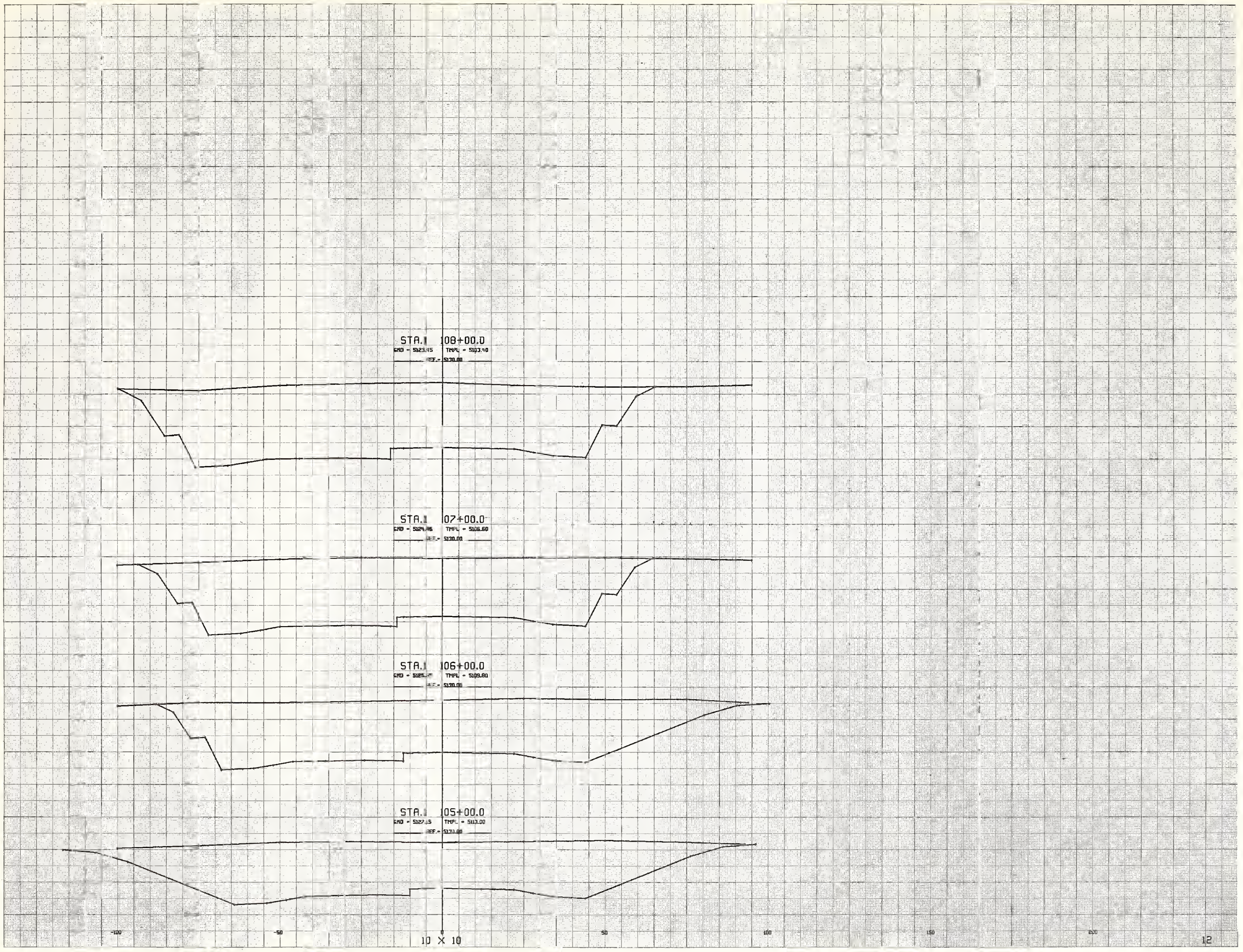
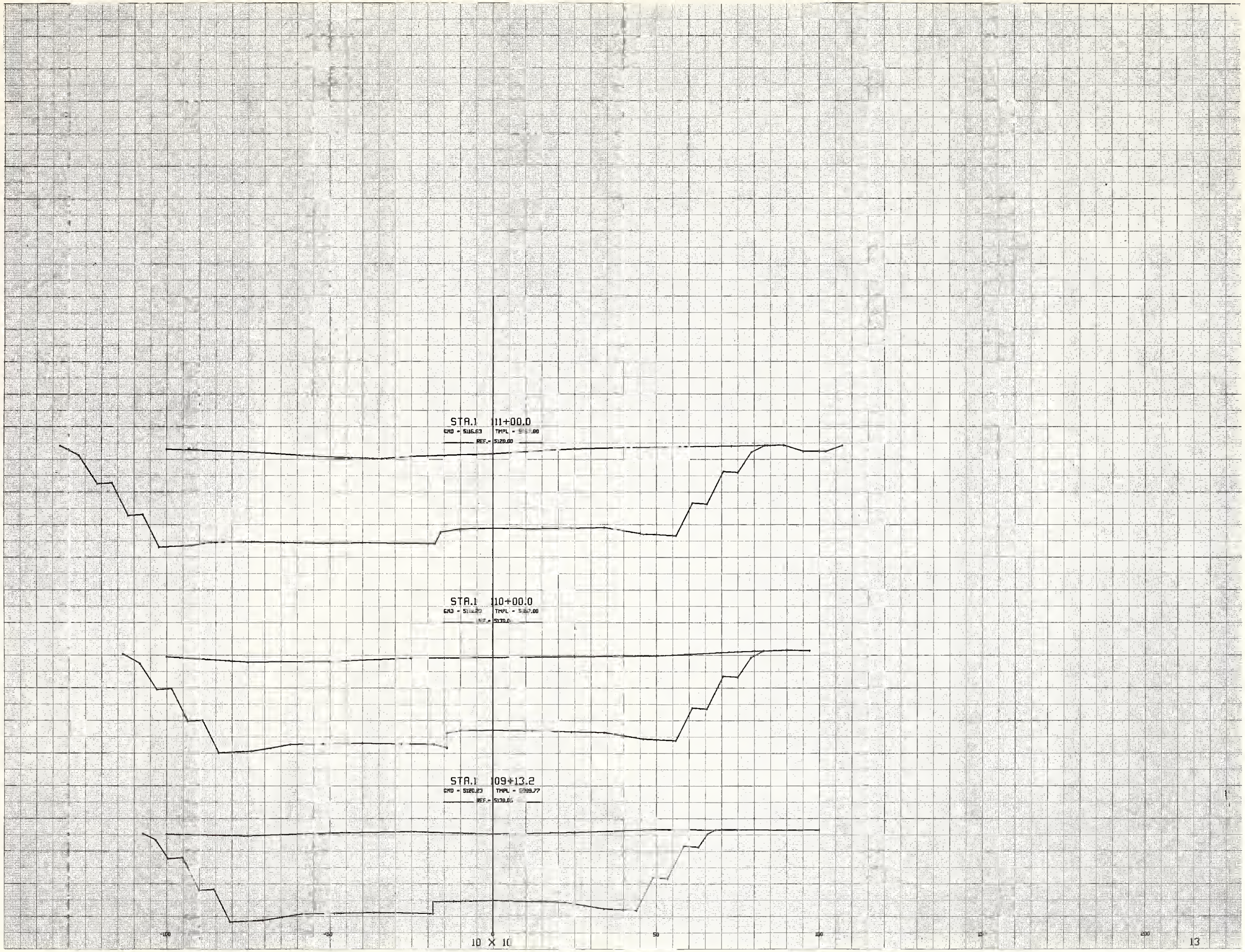


ILLUSTRATION OF VERTICAL
& HOLD OPTIONS OF TEMPLATE DESIGN

STA.1 104+00.0
GND = 5128.75 TMPL = 5116.20
REF.= 5170.00
STA.1 103+00.0
GND = 5129.85 TMPL = 5119.40
REF.= 5140.00
Improper Solution
Caused By Grade Differential
During Median Run
STA.1 102+00.0
GND = 5131.68 TMPL = 5122.57
REF.= 5140.00
STA.1 96+00.0
GND = 5139.25 TMPL = 5137.21
REF.= 5150.00
STA.1 91+00.0
GND = 5148.58 TMPL = 5147.08
REF.= 5160.00
-100
-50
0
50
100
150
200
10 X 10
11


STA.1 108+00.0
GRD = 5123.45 TMPL = 5103.40
REF.= 5130.00
STA.1 07+00.0
GRD = 5124.46 TMPL = 5106.60
REF.= 5130.00
STA.1 106+00.0
GRD = 5125.4 TMPL = 5109.80
REF.= 5130.00
STA.1 105+00.0
GRD = 5127.5 TMPL = 5113.00
REF.= 5130.00
-100
-50
0
50
100
150
200
10 X 10
12

STA.1 111+00.0
GND = 5116.63 TMPL = 5[illegible].00
REF.= 5120.00
STA.1 110+00.0
GND = 51[illegible] TMPL = 5[illegible]7.00
REF.= 5130.0[illegible]
STA.1 109+13.2
GND = 5120.23 TMPL = 5099.77
REF.= 5130.00
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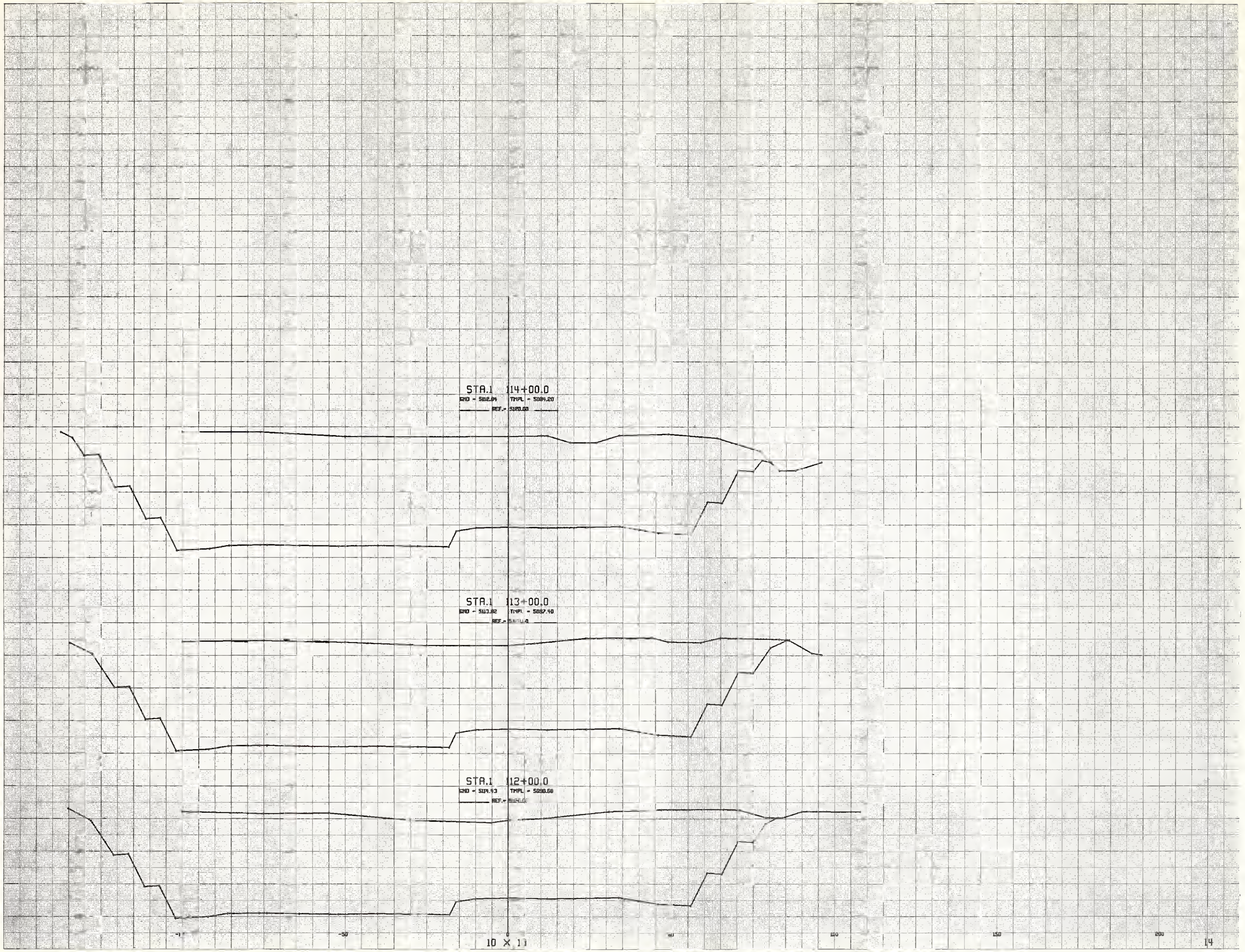
-50
0
50
100
150
200
10 X 10


STA.1 114+00.0
GND - 5102.04 TMPL - 5084.20
REF.- 5120.00
STA.1 113+00.0
GND - 5113.02 TMPL - 5087.40
REF.- [illegible]
STA.1 112+00.0
GND - 5114.93 TMPL - 5090.60
REF.- [illegible]
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-50
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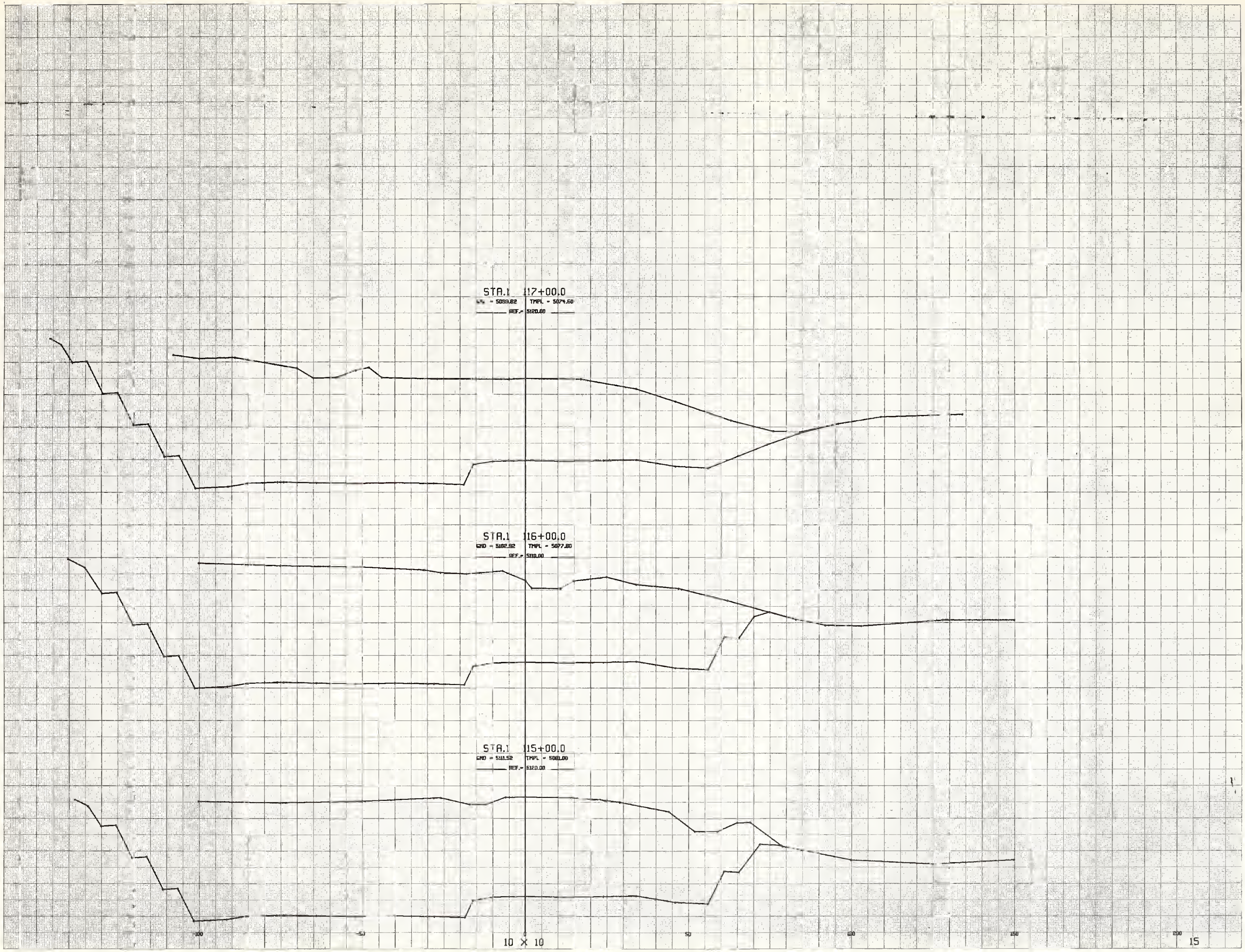
100
150
200
10 X 10


STA.1 117+00.0
GND = 5089.82
TMPL = 5074.60
REF.= 5120.00
STA.1 116+00.0
GND = 5102.92
TMPL = 5077.80
REF.= 5110.00
STA.1 115+00.0
GND = 5111.52
TMPL = 5081.00
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-50
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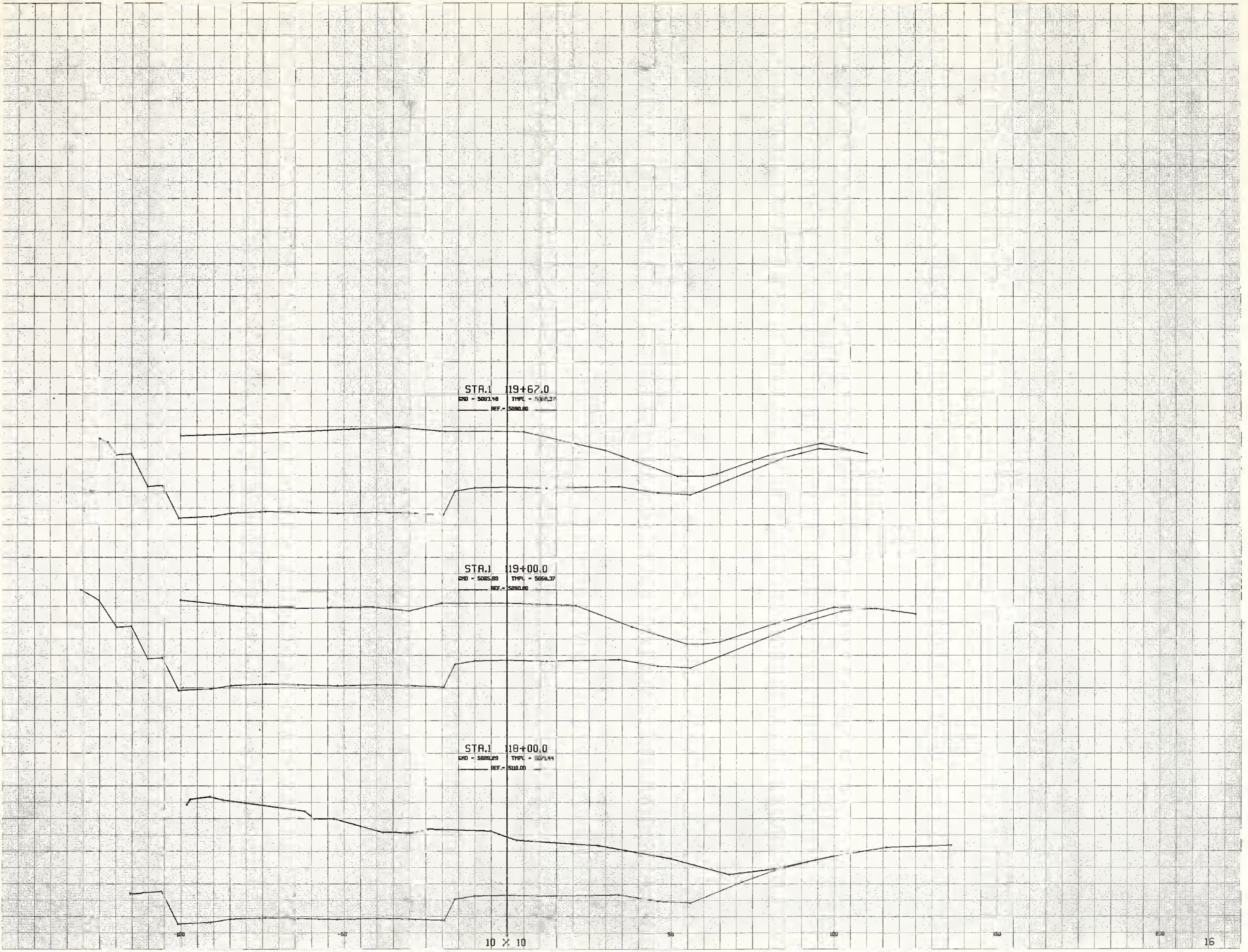
50
100
150
200
10 X 10
15


STA.1 119+67.0
GRD - 5083.48 TMPL - [illegible]
REF.- 5090.00
STA.1 119+00.0
GRD - 5085.88 TMPL - 5068.37
REF.- 5090.00
STA.1 118+00.0
GRD - 5088.29 TMPL - 5071.44
REF.- 5110.00
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-50
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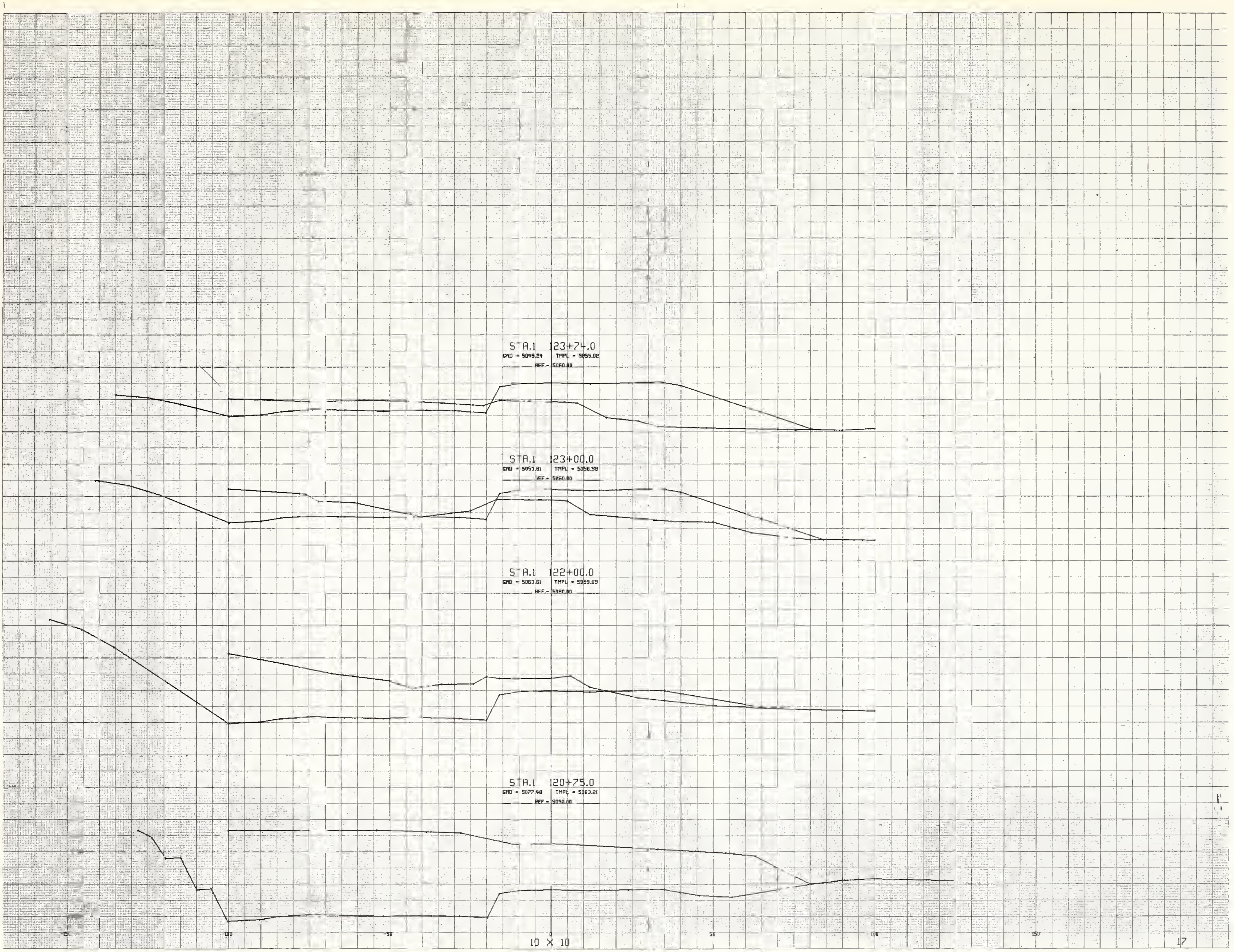
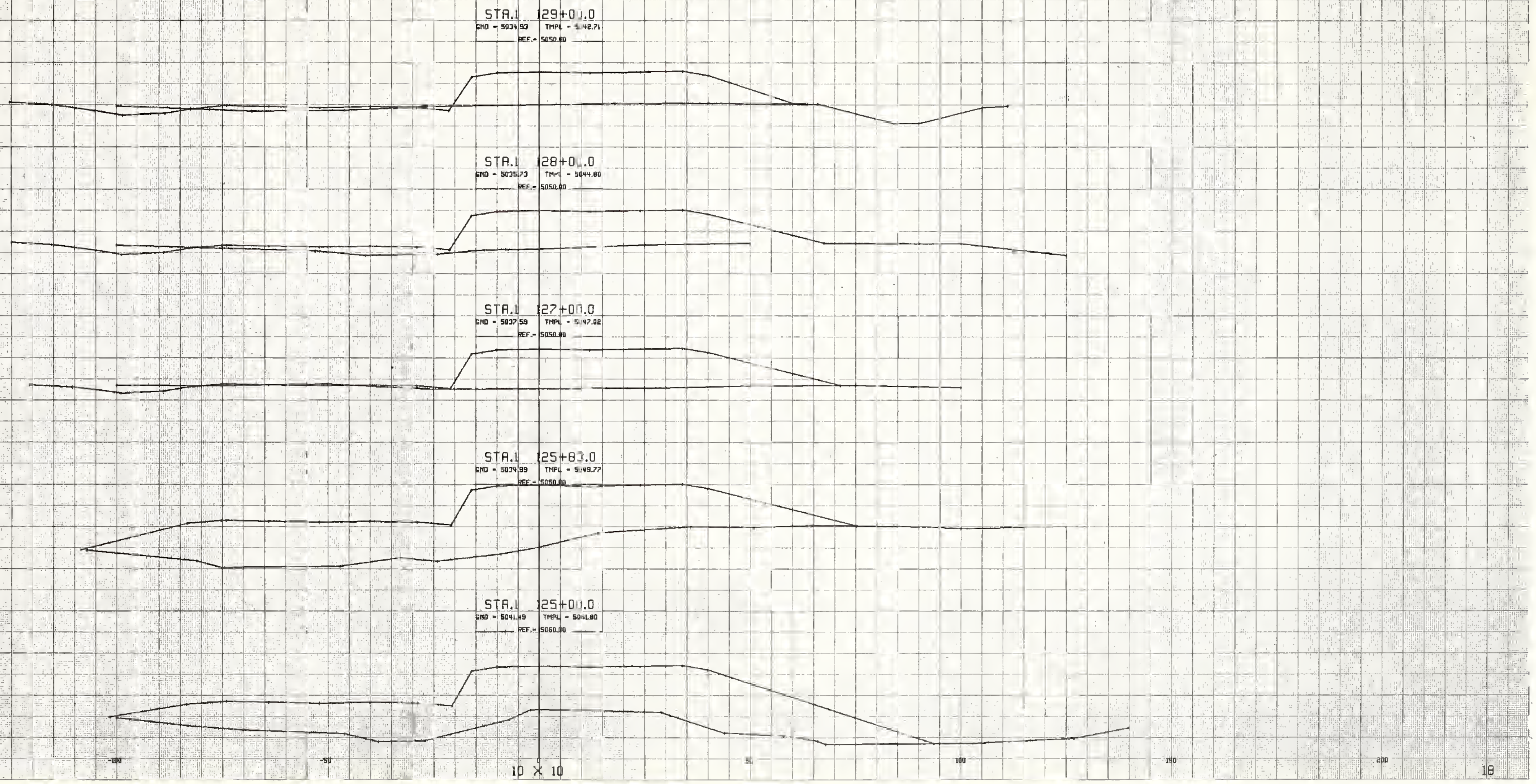
100
150
200
10 X 10
16


STA.1 123+74.0
GND - 5049.24 TMPL - 5055.02
REF - 5060.00
STA.1 123+00.0
GND - 5053.81 TMPL - 5056.98
REF - 5060.00
STA.1 122+00.0
GND - 5063.61 TMPL - 5059.69
REF - 5090.00
STA.1 120+75.0
GND - 5077.48 TMPL - 5063.21
REF - 5090.00
-150
-100
-50
0
50
100
150
10 X 10


STA.1 129+00.0
GND - 5034.93
TMPL - 5042.71
REF.- 5050.00
STA.1 128+00.0
GND - 5035.73
TMPL - 5044.80
REF.- 5050.00
STA.1 127+00.0
GND - 5037.59
TMPL - 5047.02
REF.- 5050.00
STA.1 125+83.0
GND - 5034.89
TMPL - 5049.77
REF.- 5050.00
STA.1 125+00.0
GND - 5041.49
TMPL - 5041.80
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-50
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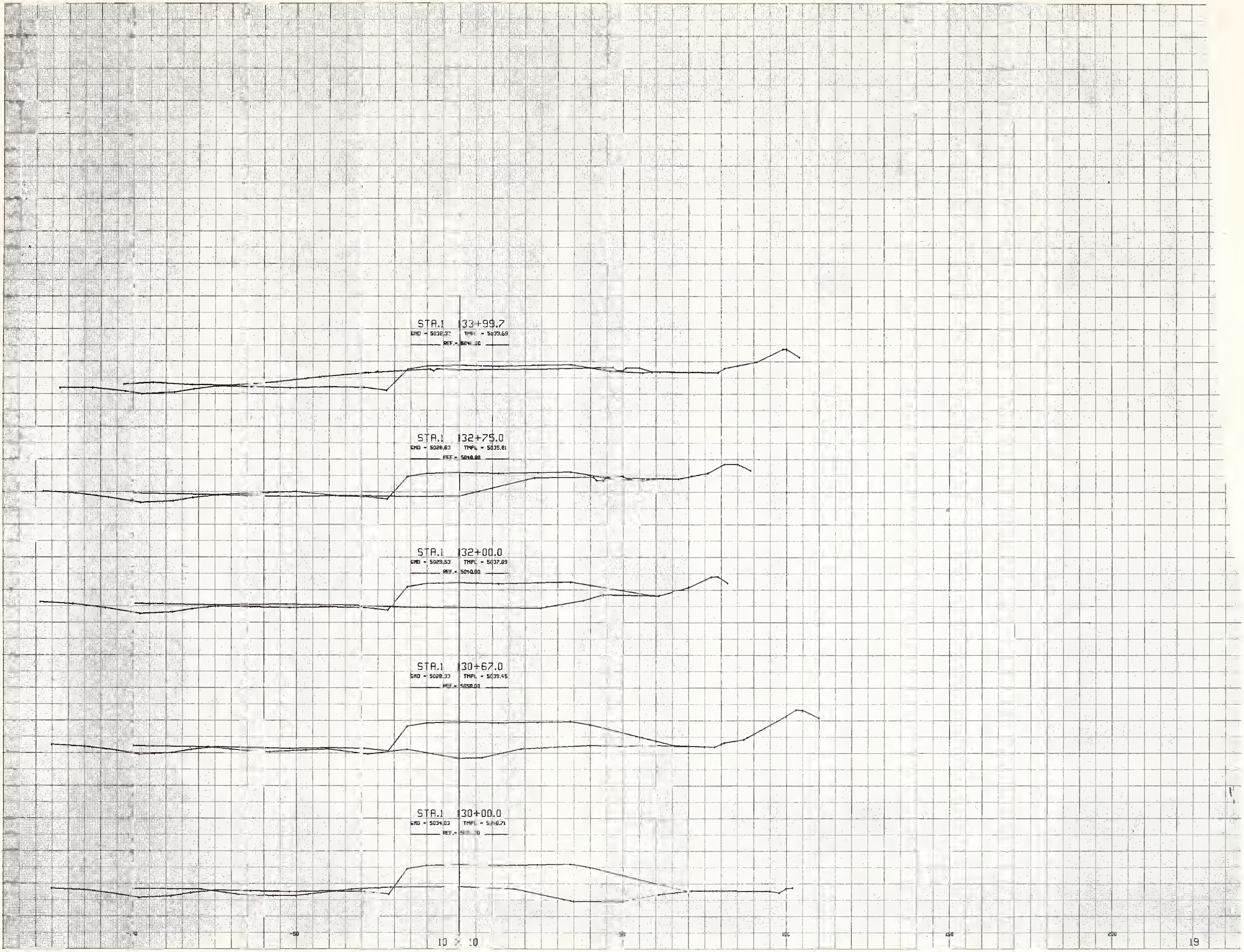
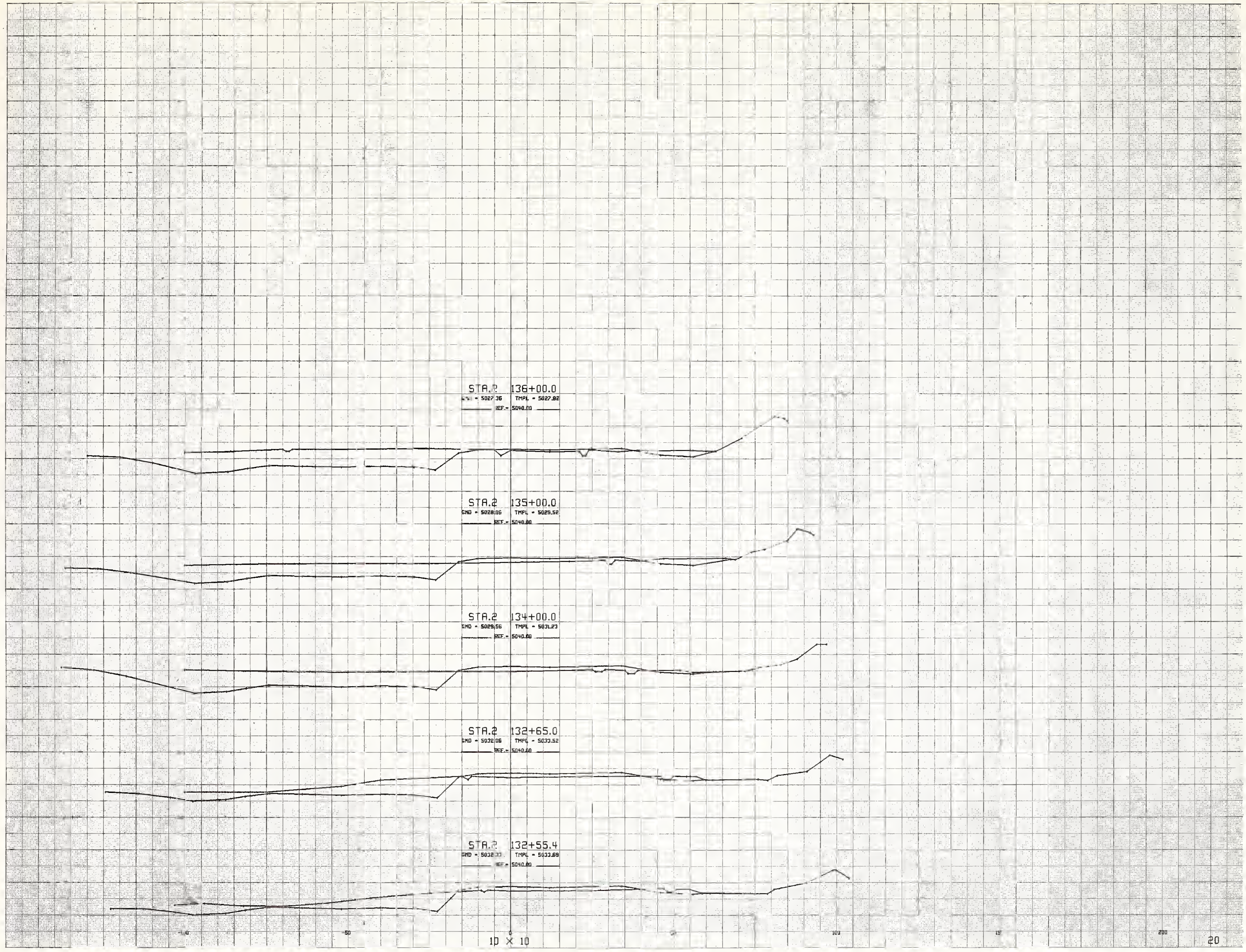
100
150
200
10 X 10
18


STA.1 133+99.7
GND - 5032.32 TMPL - 5033.69
REF.- 5041.00
STA.1 132+75.0
GND - 5028.63 TMPL - 5035.81
REF.- 5040.00
STA.1 132+00.0
GND - 5029.53 TMPL - 5037.09
REF.- 5040.00
STA.1 130+67.0
GND - 5028.33 TMPL - 5039.45
REF.- 5050.00
STA.1 130+00.0
GND - 5034.03 TMPL - 5040.71
REF.- [illegible]
-100
-50
50
100
150
200
10 X 10


STA.2 136+00.0
GND = 5027.36 TMPL = 5027.82
REF = 5040.00
STA.2 135+00.0
GND = 5028.06 TMPL = 5029.52
REF = 5040.00
STA.2 134+00.0
GND = 5029.56 TMPL = 5031.23
REF = 5040.00
STA.2 132+65.0
GND = 5032.06 TMPL = 5033.52
REF = 5040.00
STA.2 132+55.4
GND = 5032.[illegible] TMPL = 5033.69
REF = 5040.00
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-50
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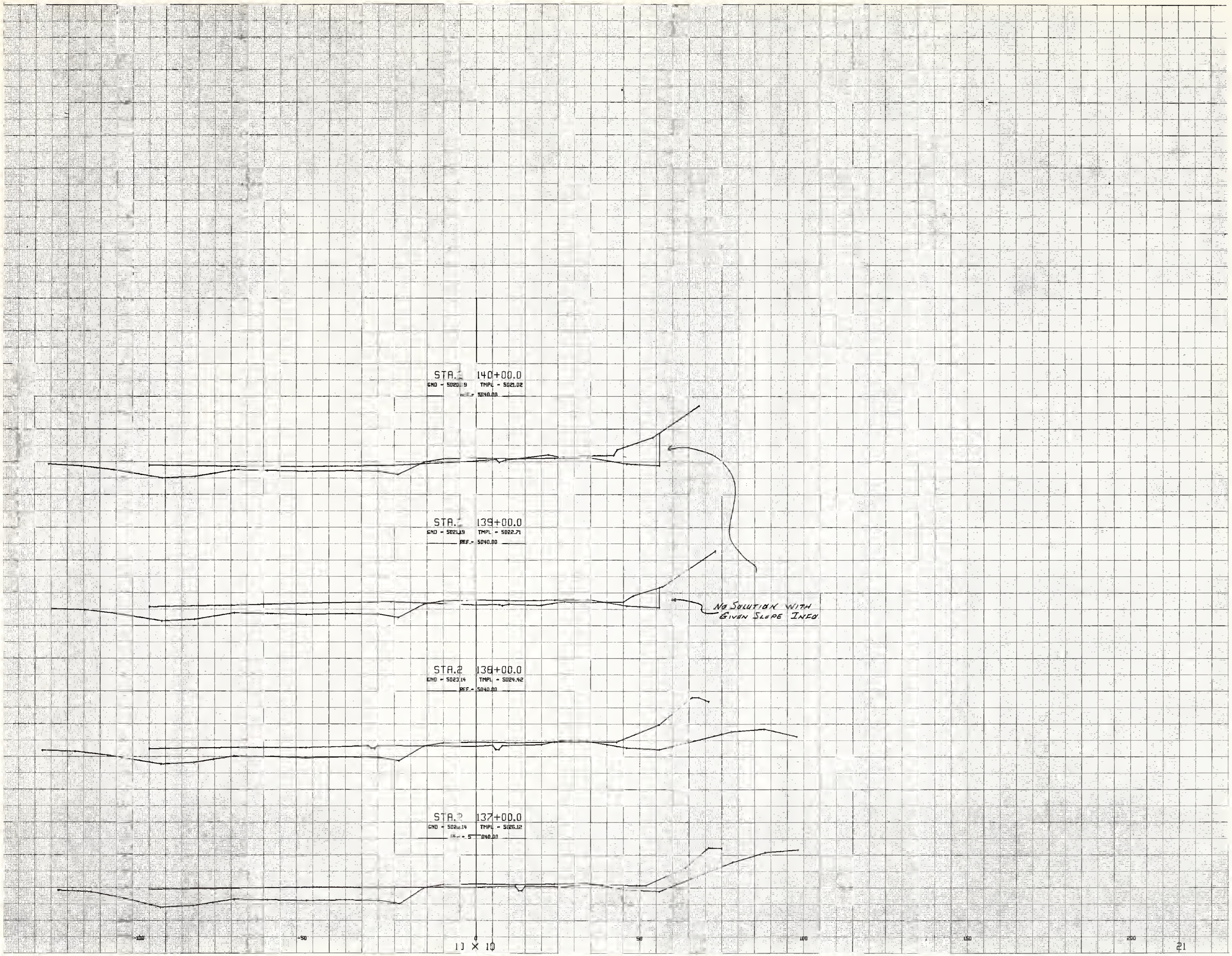
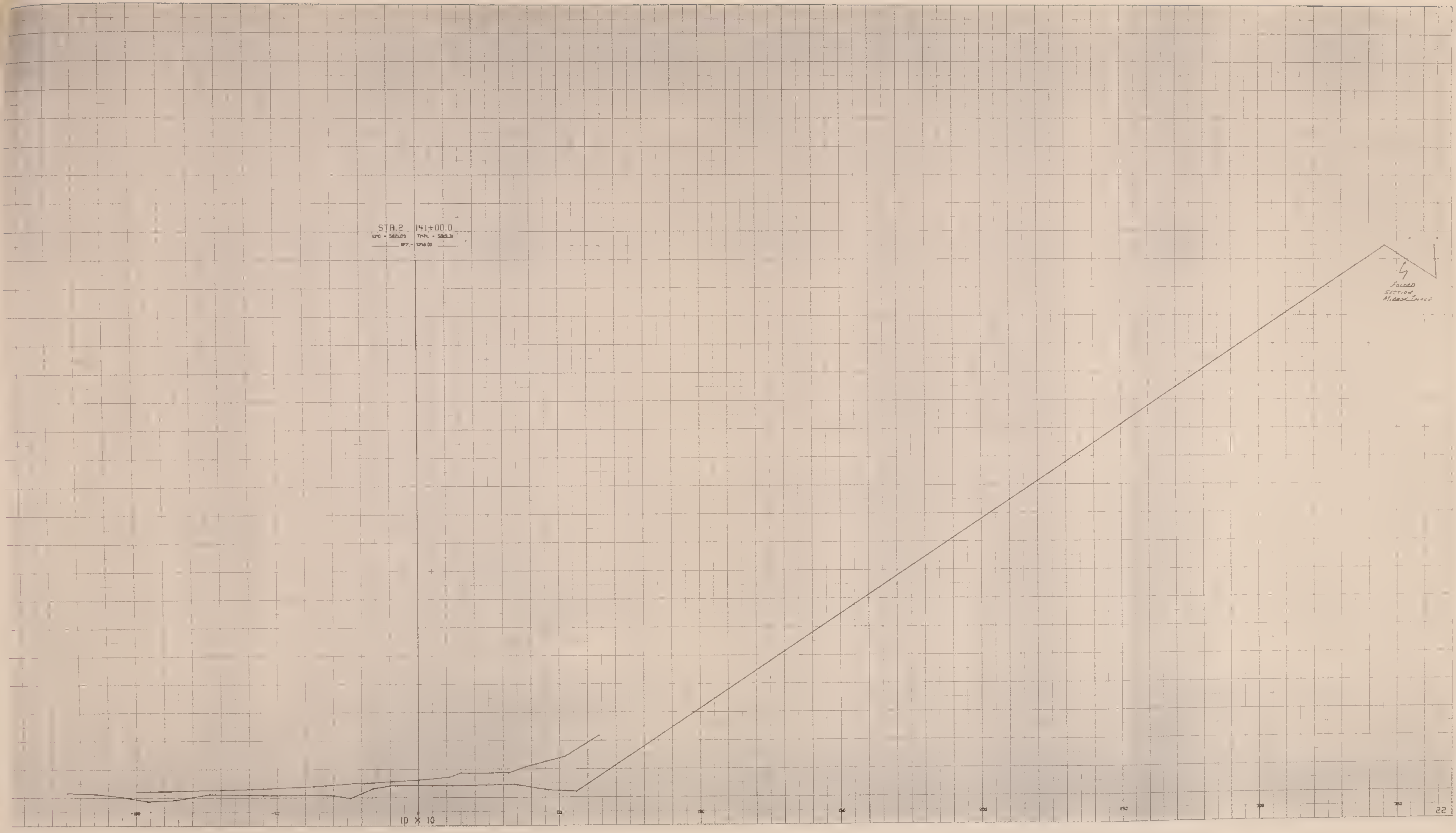
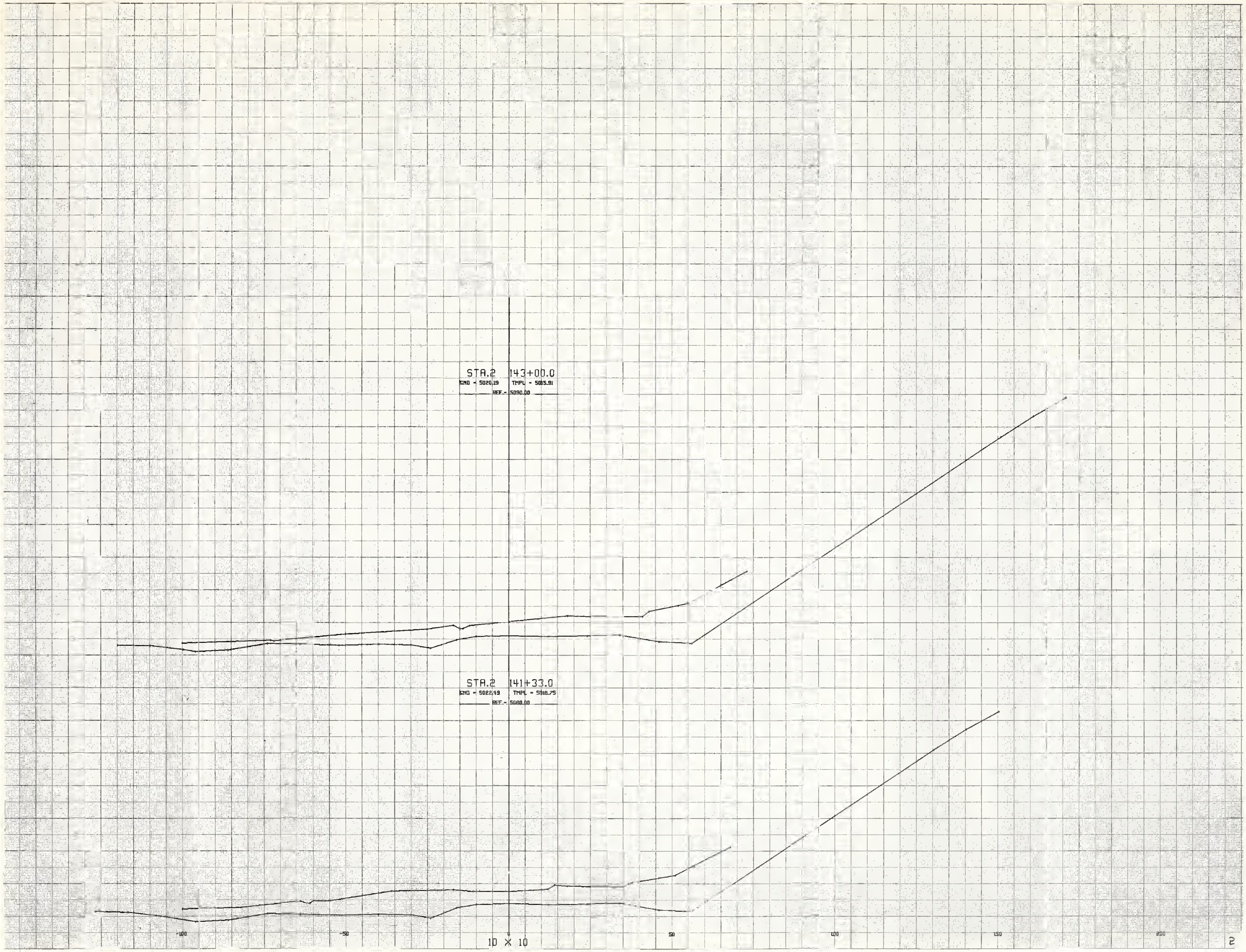
50
100
150
200
10 X 10
20



NO SOLUTION WITH GIVEN SLOPE INFO


STA.2 141+00.0
GRD - 5021.09
TMPL - 5369.31
REF. - 5218.00
FOLDED SECTION MIRROR IMAGE
-100
-50
50
100
150
200
250
300
350
10 X 10


STA.2 143+00.0
GND - 5020.19
TMPL - 5015.91
REF - 5090.00
STA.2 141+33.0
GND - 5022.49
TMPL - 5018.75
REF - 5080.00
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-50
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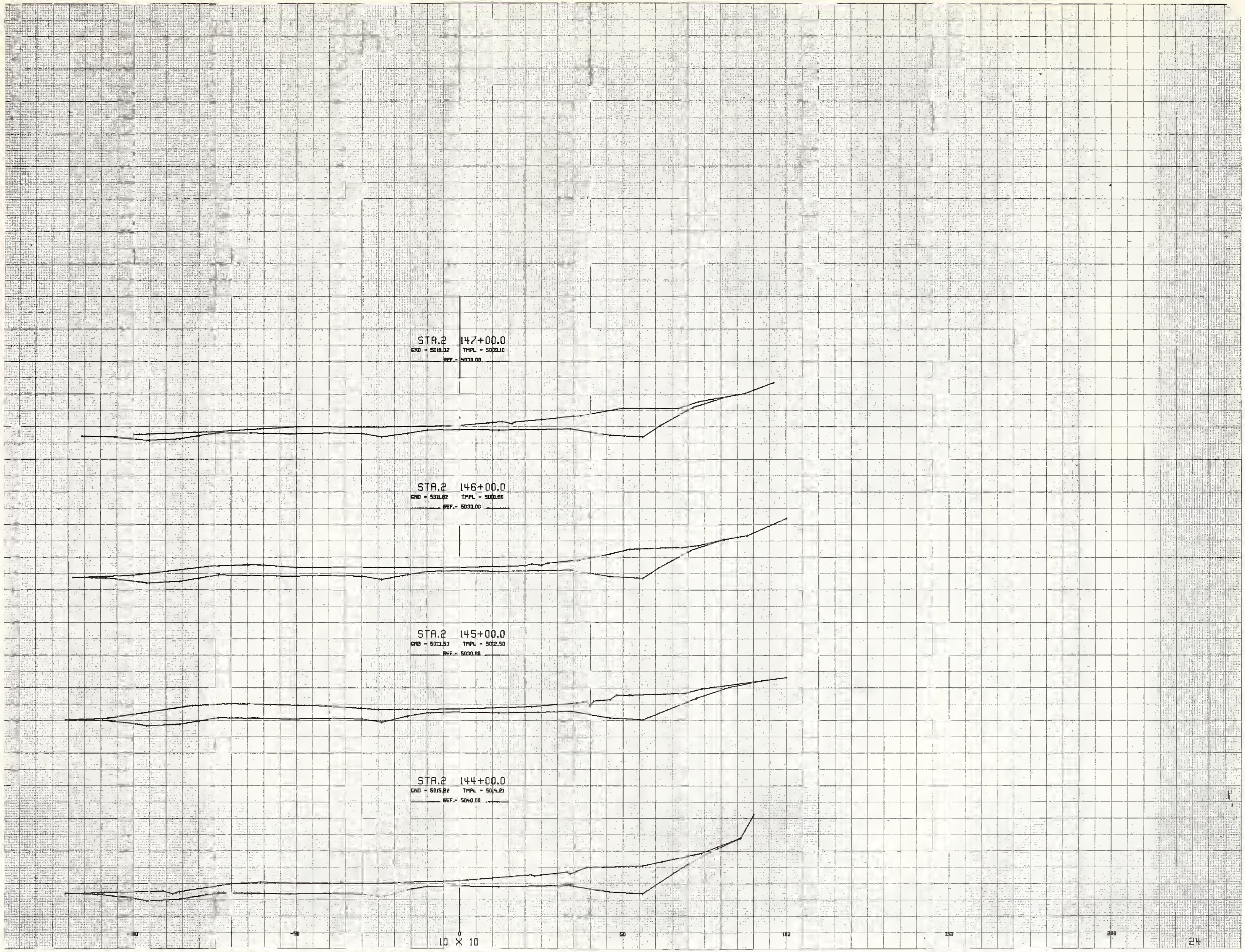
100
150
200
10 X 10


STA.2 147+00.0
GND - 5010.32 TMPL - 5009.10
REF.- 5030.00
STA.2 146+00.0
GND - 5011.82 TMPL - 5010.80
REF.- 5030.00
STA.2 145+00.0
GND - 5013.53 TMPL - 5012.50
REF.- 5030.00
STA.2 144+00.0
GND - 5015.82 TMPL - 5014.21
REF.- 5040.00
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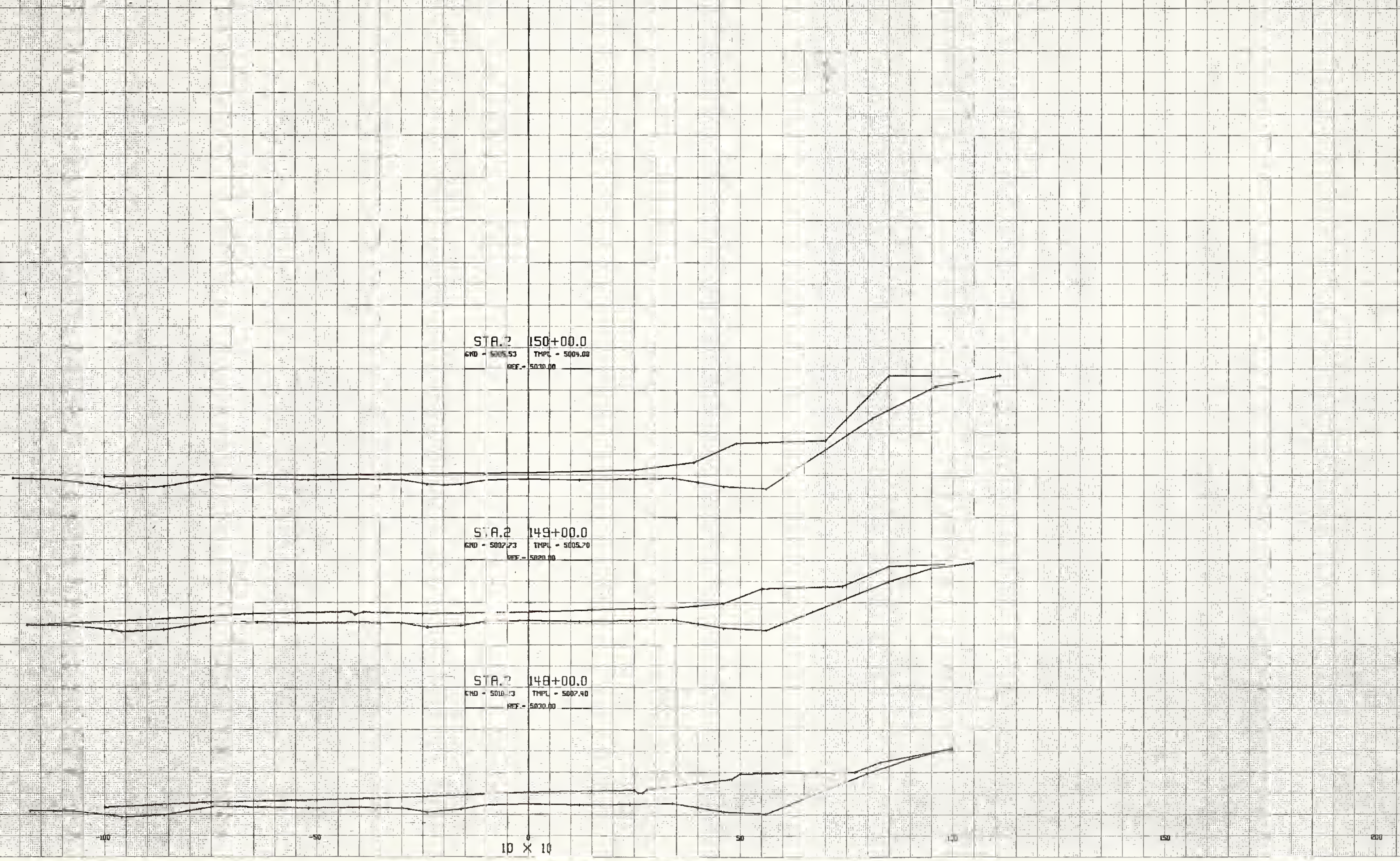
10 X 10


STA.2 150+00.0
GND - 5005.53
TMPL - 5004.00
REF.- 5030.00
STA.2 149+00.0
GND - 5007.73
TMPL - 5005.70
REF.- 5020.00
STA.2 148+00.0
GND - 5010.23
TMPL - 5007.40
REF.- 5030.00
-100
-50
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50
100
150
200
10 X 10